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CONTENTS.

MEDICAL SOCIETY PAPERS.

Uterine Displacements and Method of Treatment. By J. B. Bolton, M. D., Eureka Springs 1

1. Double Ovarian Cyst Carcinomatous. 2. Multilocular Cyst, Left Ovary. By J. A. Westerfield 19

Neuritis. By W. B. Barner, M. D., Little Rock 11

Dr. Gibson's Resignation 17

EDITORIAL.

Card from Dr. L. P. Gibson 18

Needed Medical Legislation 19

The Appointment of Dr. P O. Hooper—To the Profession 20

EDITORIAL NOTES.

Annual Meeting Little Rock Medical Society 21

Appointment of Dr. F. L. French to the Chair of Materia Medica, in the Medical Department, A. I. U 22

OBITUARY.

Dr. J. J. McAlmont 22

THE ARKANSAS MEDICAL SOCIETY.

Officers of the Society, 1896-97 26

COUNTY SOCIETIES.

Roster of County Societies 26

MISCELLANY.

Roentgen Rays in Gynecology 27

Surgery for Typhoid Perforations. By Joseph Price, M. D., Philadelphia 28

Ruptured Ectopic—Gestation Sac. By A. Brothers, B. S., M. D. 39

Further Investigation of Eucain Hydrochlorate as a Local Anesthetic. By G. W. Spencer, M. D., Philadelphia 41

THE

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VOLUME VIII. JANUARY, 1897. NUMBER 1.

Medical Society Papers.

Uterine Displacements and Method of Treatment.

BY J. B. BOLTON, M. D., EUREKA SPRINGS.

This subject is so broad and so important that the profession, as a whole, are deeply interested in everything that tends to throw any light upon the subject; for we know that all along the ages, down to the present time, the greatest minds in our profession have been divided upon this much debated subject. And if I shall, in any way, throw one ray of light upon this question, or be the means of relieving one poor sufferer, I shall think I have done well.

Therefore, in the first place, it is absolutely necessary that he who pretends to give relief in malpositions, should know well the anatomy of the pelvis, the organs therein contained, their normal functions and dependence upon each other; for the greatest reciprocity act I know of exists between the uterus, bladder and rectum. You cannot disturb the functions of one but what it will, in some way, influence the others; especially is this so in any malposition of the uterus. We must then consider carefully this little organ that causes so much suffering among

women. Normally, it is capable of great mobility; forward, backward, upward and downward, from whichever way the force is applied or tention made; for example, dilitation of the bladder will force it backward; coughing, downward. But if everything is intact it will go back to its normal place as soon as the force is removed.

Now, I will lay this down as a fact: There is no normal position for the uterus, but each individual woman has her normal health line, which to some other woman would be abnormal; hence we cannot have one standard. Many of you have seen two women with uteri in exactly the same position; in one it would be normal, in the other, abnormal, and cause serious trouble.

We know the uterus is suspended in the pelvis by its normal supports, the broad, round and utero-vesical ligaments, and as I shall only in this paper be able to call your attention to two and the most important displacements for the reason they are the most frequent, viz: retroversion and prolapsus. I want to call your attention especially to the round ligament, which plays such an important part in these malpositions, as well as restoring the organ to its natural position. Due and careful consideration should be given them on account of their anatomical make-up and difference from the other ligaments, being composed not wholly of peritoneal tissue, but contain muscular in great quantity, and are simply outgrowths from the uterus in the form of round cords, covered with peritonaeum, hence their great power of relaxation and contraction.

In these displacements we have third degrees. Often a woman may have a displacement of the first degree and not suffer much inconvenience from it; then a point that I want to especially emphasize is that the descent of the organ is, as a rule, gradual, sometimes taking months in reaching the second and third degrees; hence it necessarily takes time for the organ to make its ascent. I have not time to dwell upon the conditions, complications and reflex troubles that flow from these malpositions. But the main object of this paper, and my chief desire is to bring to

your minds this very important question: Are we not having too much Gynic surgery? Cannot many of these poor sufferers be relieved and made happy without being mutilated, castrated or maimed for life? I say, yes. I would not have you misunderstand me, for I say give all honor and praise to the advance made in Gynic surgery in the last few years, and there are many cases that cannot be relieved only by some of these operations.

But I claim it is our duty to be very careful and use good judgment and discrimination in these cases, and I will hail with pride the day when praise and honor will not be bestowed upon him who claims he has performed so many operations during the year. But the test of skill will be rather how many women have you relieved without the knife. I lay this rule down as safe and always profitable: Take no man's word that his theory or method is true and correct until you have by due trial, strict examination and clinical experience found them so to be. Then lay aside all preconceived ideas or prejudice, if any you had, and adopt them.

It is now with pride and pleasure I quote from that masterly and ethical production of our own E. G. Epler, his inaugural address delivered before the Sebastian County Medical Society, January 14, 1896. He says: "We ought to add to the general fund of medical knowledge by refining that which we learn from medical lore, and by developing new facts and principles. In performing this second great duty to our guild we have to contend with a very great difficulty, one that has ever been a sore affliction to the profession, viz: Lack of thoroughness on the part of medical men or others whose contributions to science have been appropriated by our profession and made use of in practice. About the first thing the recent graduate does after leaving the medical college is to unlearn much that has been taught him. To winnow the grains of truth from the chaff of finely spun theories, dogmas and distorted facts. Then there is a crying evil of inaccuracy in observation, falsifying of facts, whether willful or not, and the creating of wide generalizations from a few observed phenomena." What is truer than this, save the simple gospel?

I claim, and believe that I can substantiate it, that the Gynecologists of to-day are prone to do too much abdominal and pelvic surgery; that we are not thorough enough in our diagnosis. I believe it is unskillful and unsurgical for us to perform Alexander's operation, hysterectomy, ventrofixation, symphyseotomy, amputation of the cervix, laparotomy plastic operation, curettage and castration, upon nearly every woman who presents herself, from those in natural labor down to those suffering from gonorrhoea. Abroad they are even more given to performing these operations promiscuously than in the United States, and if it should keep up at the stride it is now making in the old countries, it will be hard to find a woman with her pelvic organ as the great, wise Creator made her.

I do not claim that these operations should never be performed, for they are admissible, just and right in malignant diseases. Certain malpositions, certain kinds of diseases of the uterus and appendages, extra uterine pregnancies and some labors. We, on the other hand, should not swing too far in the opposite direction; and should, when the conditions are such that an operation is advisable, not hesitate to perform it, and not delay until our patient is, in a manner, dead, and then perform the operation and bring Gynic surgery into contempt. When if, perhaps, you had done your duty and operated when you should your patient would have made a good recovery.

I admire very much my personal friend, Dr. Joseph Price, of Philadelphia, for the firm stand he has taken in claiming "that immediately after the trouble is diagnosed and is found to be such that a surgical operation is advisable, do so at once, as soon as you can possibly prepare the patient." His success in abdominal and pelvic surgery speaks in tones unmistakable that his theory is correct. I believe he has done as much, or more, than any other man in the profession in this country to raise Gynecological surgery to the high standard it has attained.

Now, in presenting to this body my method of treating uterine displacements, I do not come with some new and untried theory, but present to you facts. I have used this treatment for

over ten years. In that space of time I have treated over seven hundred (700) women; of these over 60 per cent have recovered, over 20 per cent benefited, and 15 per cent not benefited. My residence being such that most of my patients are transient, and after discharged return to their homes, all over this country, it has been quite a task for me to keep track of them, but I have done so in many cases; heard from them each year running back from the present time to ten years since. I could give you names and addresses of many of these patients, but time and space forbids, therefore, I will only report one or two.

Seven years ago Mrs. W—., age 41, from one of the Northern States, consulted me for a bad case of prolapsus of ten years standing. History of the case is as follows: Her family physician, when consulted, found she had a laceration of the perineum, which occurred at the birth of her only child ten years before. He told her an operation would have to be performed; the patient objected, but her suffering had become so great she called upon him the second time. He, to confirm his diagnosis and advice as to operating, sent her to Dr. Reeves Jackson, of Chicago, who has since died, but who, you know, was a man of some ability. He advised the operation for the laceration and removal of the left ovary. The patient would not consent, but returned home and submitted to the operation for the laceration by her own physician. But to her great disappointment and the doctor's surprise, she gained very little relief. As the doctor had assured her the operation would give her relief, she became very despondent, and in 1889 came under my care. Upon examination I found her suffering with a prolapsus of the second degree, with many complications and reflex troubles; especially in the left hip; she had sciatica, soreness and tenderness all over the abdomen, emaciated, feeble and very nervous. After examination I told her I thought I could benefit her. She asked the question that all patients invariably put: How long will it take to relieve me? I told her if I could do so at all it would take from six to nine months. I treated her six months, discharged her as well, and she returned to her home. I heard

from her every year until this year, and she would always say, "I am entirely well." As I was writing this paper the other day, who should step into my office but this woman that I was reporting as well. After we had talked a few moments, I naturally supposed she had returned for treatment, as many do. I remarked: "I wish you had come a little sooner, for I was just writing your case up to report to the Medical Society, and now I will have to change it." She laughed and said: "No, I have never had an ache or a pain since you treated me, that is from my old trouble; feel as strong and healthy in that respect as I did when a girl." She said: "I have been to San Antonio for bronchitis, which was a sequel of la grippe, and I was on my way home, so I thought I would come and see you in person instead of writing."

The next case is that of Mrs. S—, age 36, residing in Texas, who had consulted some of the most noted physicians in the East; had been in three private sanitariums for women, and was the most wretched creature I ever saw. She said every physician she consulted wanted to remove her ovaries, shorten the round ligaments, perform a plastic operation or do something of the kind. All that saved her was her intense aversion to the knife; just simply to talk about using one on her would almost throw her into hysteria.

She came under my care six years ago. I found her suffering from a severe case of retroversion of several years standing, with resulting bladder and rectal troubles, intense soreness and tenderness all over the abdomen, especially over the region of the ovaries; weight eighty pounds, very pale, nervous to a distressing degree, apprehensive of some terrible trouble constantly about to befall her, insomnia badly. I told her if I could benefit her at all it would take nine or twelve months. She says: "I would stay five years if I could get any relief." I treated her eight months and twenty days, discharged her weighing 130 pounds. And each year she has written me, "I am as well as I can be." I could give you case after case similar to these, but I must not trespass on your time, and bring this paper to a close

as soon as possible. The good points I claim for my method of treating these cases are:

First—It is clean, and by removing this tampon every other day you keep the vagina cleansed of the unhealthy secretions that necessarily follow these malpositions and tend to keep the mucous membrane in an abnormal condition.

Second—It acts as a splint to the displaced uterus, and you are not liable to raise uterus above health line and thereby cut off the circulation, just what you are trying to overcome, as is often done with pessaries.

Third—It is almost painless and it gives your patient so much relief each time that she is always on hand for the treatment, which is one of the most important factors in a successful treatment.

I will now give you the technique of my method. I first take lamb's wool and make a tampon in the shape of an egg, tying the string to the apex. If I am going to treat a case of retroversion I introduce my speculum, then grasp this tampon with a strong pair of dressing forceps and introduce it through the speculum as far back in the vagina as possible; I then gradually withdraw the speculum, holding the tampon in position with forceps. After the speculum has been removed, I loosen my hold on tampon and withdraw the forceps, leaving the tampon in the position it was placed at first; but now comes the important part of this method, and unless carried out you will not be successful. And it takes practice and experience to perform it, and it cannot be done right at the first attempt, for we depend entirely upon the touch. It is done thus: I introduce my index and middle fingers well into the vagina while the patient is still lying on her back as she was when the tampon was placed there; the middle finger being the longer of the two, is placed against the tampon, the index against the cervix. I force the tampon backwards and upwards, at the same time press firmly upon the cervix with the index finger; by this means you have a double leverage on the displaced uterus; gradually raise it from the bed upon which it has laid so long, but you cannot always do this with ease. Some-

times you will find you will have to place the patient in the Sims, standing, leaning forward, or even in the knee-breast position, before you can raise the displaced organ. I repeat this treatment usually every other day, and gradually you will find the overtaxed ligaments going back to their normal length, the uterus gradually ascending as it gradually descended. Each time you will find the tampon is easier to move, for the pressure is less, and soon you will find you will be compelled to enlarge the tampon in order to have it remain in place. The next most important point in these malpositions is the length of time it takes for them to recover. My experience has been that it takes all the way from two to nine months, and this is reasonable and scientific. We cannot, by any mechanical means, expect to replace an organ in a few days or weeks that was months and years descending, therefore, we must consider this point.

The next question you would naturally ask, do you never use any kind of pessary? I would answer, "No, but I remove many, which from continued wearing and misfitting, have of themselves set up a serious trouble. As a local application, I treat the conditions as I find them. I use everything from coal oil up to chromic acid. The most satisfactory in my hands have been electricity, listerine, Pond's Extract, benne plant, iodoform, Powd. Campho., phenique, carbolic acid, Tinct. iodine, aristol, eucalyptus, menthol. I give tonics as indications require.

But the greatest aid I have been able to find is uterine massage. When done skillfully the benefits are very satisfactory, indeed; then, it encourages uterine contraction, gives tone to the ligaments, removes soreness and pain and in many ways helps the uterus to resume its normal position.

I will repeat again, many of these cases operated upon to-day can be relieved, but it takes time, work and patience. But what we need more to-day than anything else are more skillful obstetricians, for it is during the puerperium that most of these troubles have their origin. I will now explain my method, and I hope ere long some member of this association of the great, grand and glorious State of Arkansas may discover some method

that will relieve these poor sufferers so successfully that surgical operations will not be heard of in such cases.

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1. Double Ovarian Cyst Carcinomatous--2. Multilocular Cyst, Left Ovary.

J. A. WESTERFIELD.

Case 1. Mrs. J. V., age 60, general family history good, had enjoyed good health all her life, mother of several children. In September, 1894, her health somewhat failed, had pains referable to her pelvis and back. In November following, noticed an enlargement in left iliac, a little later in the right. They grew rapidly, and at time of my first visit, in May of '95, made in company with Dr. J. H. Westerfield, her abdomen was found symmetrically enlarged to an enormous extent, some fluid being aspirated was found clear, completely coagulating with heat. The presence of tumor was doubted, notwithstanding the clear history of ovarian growth. Aspirating a few days later, other colors in fluid were found to exist, and an operation was advised. At this time her general health was bad, and feet oedematous. Upon opening the abdomen a large cyst was found coming from each ovarian region, left containing about 2 1-2 gallons of fluid, the other somewhat smaller, they were both multilocular and fleshy. The right had no pedicle, but in its place was a disk-shaped body, about 5 inches in diameter and 2 inches thick, filled with a granular substance, held together by a colloid fluid, or gluey substance. Under this I passed ligatures in various ways until it was secured. On parietal peritoneum was found a great number of little glandular bodies, about the size of a split almond; upon omentum, intestine and mesentery was found, without number, little bodies in size, and shape of about one-third of an inch of a round lead pencil; they were white, and filled with a substance resembling cold tallow. This woman moved along without fever, had appetite and in fact, no untoward symptoms for eleven days. She then had a little looseness of bowels, great burning in the abdomen, and some delirium, dying two days after. The abdomen was never at any time

swollen, but lower angle of wound showed a tendency to part. Dr. J. H. Westerfield visited her about the ninth day after operation and took out some stitches, leaving her, so far as could be seen, in a favorable condition.

She was not visited after the ninth day, her home being twenty miles distant. I do not attempt to state any cause for her death, as a proper observation of her condition was not made, because of her great distance from the doctor, and the practical impossibility of making better arrangements.

Case 2. Mrs. N. V., age 38, widow for last eight years, mother of three children, with difference in age of about two years, age of the last, 9 years. After birth of last, commenced to menstruate at about the seventh month. It was somewhat painful, but had no flooding spells, but rather diminished in quantity of discharge. After a year she had no further trouble, and was, apparently, in good health, until about October, '94, an enlargement appeared in left iliac, which gradually enlarged with a gradual loss of general health up to the end of the six following months, when it gave her great trouble, from the distention of the abdomen and pain, the pain was most prominent near the ribs of left side, which were now impinged upon by the growth. Her general peace of mind was greatly disturbed by circulating the report in the community that she was pregnant. On the 13th of November, '95, at the request of Dr. Cowden, her physician, Dr. J. H. Westerfield and myself paid her a visit at her home, in Morrillton, diagnosed her condition that of left ovarian cyst. Upon opening the abdomen, found a fibrocystic tumor, which was estimated to be about as heavy, sack and fluid, as fifty-five pounds. The other ovary being in an advanced stage of cystic degeneration, was also removed, together with the tube. My thermo-cautery refusing to work, was unable to cauterize the stumps, as had been my original design, they were dropped back after ligation. There was considerable acites, and flakes of caseous material down in the pelvis, which was carefully mopped out, but the abdomen at no time was irrigated with water. At time of operation her pulse was 90, next day pulse

and temperature normal, rested well during the night, except some vomiting. From about the third day she manifested considerable disturbance by sweating, rapid pulse, and fever ranging from 100 to 102, urine had to be drawn, and took but little nourishment. About the sixth day an enlargement appeared above the symphysis, general abdominal cavity but little distended, considerable gas, however, from this time, collected in the intestine. About the fifteenth day aspirated through the posterior vaginal wall removed near half a gallon of red serum, which entirely removed the enlargement above the symphysis, with an abatement of all her manifestations of septicemia. A drain tube was placed in through a cannula, which accidentally escaped thirty-six hours later, the drain continuing through its tract for three or four days.

Her recovery was complete, and is now in good health, and greatly increased in flesh, has some trouble, however, in retaining her urine. The successful issue of this case is largely due to the untiring efforts and attention of Drs. Cunningham and Cowden.

Neuritis.

BY W. B. BARNER, M. D., LITTLE ROCK.

A knowledge of neuritis in its comprehensive sense will well repay the practitioner for all the time he may bestow in acquiring such knowledge. It is our purpose only in this brief paper to present to the society, in a plain way, the clinical features of multiple neuritis of malarial origin, together with our views of its etiology. The comparative infrequency of such an affection should lend a degree of interest to anything that may be contributed in regard to it. Both Gowen and Gray suggest that malaria may cause neuritis, but if there is any complete literature upon the subject we are not aware of it. There is not a physician present who does not frequently treat malarial diseases. Is there one who has seen a case of multiple malarial neuritis? If not, it is a rare affection, or is prone to be overlooked or mistaken. During the summer of 1895 the State put in a sewage system for the Arkansas Insane Hospital. This work necessitated ex-

tensive digging up of the soil in the rear campus of the buildings. The same was done during the months of July, August and September, at which time, also, there was an unusual rainfall for that season, alternating with excessive periods of heat. It was under these telluric and atmospheric conditions that there occurred an unprecedented amount of unmistakable malarial sickness among the inmates of the hospital. In the female wards these attacks presented the usual features of such illnesses, as they occur in any malarial locality similarly surrounded, excepting in point of severity. The normal surroundings of the hospital are not very conducive to the production of malaria, but these surroundings having been made abnormal by virtue of the extensive excavations of the soil, the plasmodium seemed to seize upon our population with unusual severity. As a matter of fact, many of the attacks were of a markedly congestive form, several deaths resulting from the classical congestive chill.

At the same time that this state of affairs was going on in the female wards, there occurred an endemic of peripheral multiple neuritis in the male wards. In addition, however, to these cases of neuritis there were many other males who suffered from malarial attacks of the ordinary intermittent and remittent types. Among the female patients there were two mild cases of multiple neuritis, but in the cases where the factor of severity was greatest it was in the form of internal congestions. Among the male patients, the most notable cases were those in which the poison spent its force upon the peripheral nerves. There can be no question under these circumstances but that the cases of neuritis, like the intermittent, remittent and congestive forms of fever, that prevailed conjointly with them, were due to the same cause, malarial toxaemia. Inasmuch as we did not, at the time, search for the plasmodium in the blood it is intended in the preceding remarks to show circumstantially the origin and nature of the cases of neuritis. These were of different degrees of severity. We will class them for convenience of description, as the severe, medium and mild forms.

Case 1, severe form. Jesse M., (col.), age 21 years, slight

build, admitted to the hospital in 1883, mental derangement, complete dementia, the result of early arrest of cerebral development. His condition had been apparently unchanged, both mentally and physically, for several years. All of his vital functions were sluggishly performed, and the tide of his life ran constantly at the low ebb mark. Several days previous to September 27, he presented some oedema of the ankles. On the preceding date he became absolutely paralyzed in the lower extremities. There was characteristic foot-drop, and loss of knee reflexes. The oedema in the limbs had increased. Upon pressing the limbs with the hands there was no indication of pain. Pricking them with a needle showed diminished response to this sort of excitation and marked delay in the conducting functions of the sensory nerves. These indications of abnormal sensation now extended a hand's breadth above the knees. The temperature was from 1 to 2 degrees above normal, and the pulse but little accelerated. His immediate symptoms were at no time alarming, but he succumbed to the affection within one week, apparently from exhaustion. This was the only fatal case that occurred. Part of the sciatics and of the anterior and posterior tibial nerves were examined. Their sheaths were notably congested, and the effusion in the cellular tissues was greater in their immediate vicinity. Beyond this nothing could be ascertained by the eye. Portions of them were put in Muller's fluid for subsequent study, but were lost on account of the fluid not being reliable.

Case 2, severe form. Mat S., (white), typical blonde, of slender build, age 25 years, chronic mania, following an attack of typhoid fever, he presents in a marked degree the insane diathesis, both in point of heredity and personal appearance. Was admitted to the hospital in 1893, general health was very good up to September 1. Thenceforward he became somewhat feeble, and presented some oedema of the ankles. September 7 he walked one or two miles with other patients; on the 8th was completely paralyzed in the lower extremities from knees downward. There was characteristic foot drop and loss of patellar

reflexes. In contrast with similar tests in the preceding case, the limbs were hyperaesthetic. Pressing them with the hand and pricking them with the needle gave acute pain, nor was there delay in the conducting functions of the sensory nerves. The limbs were now very edematous. The urine presented abundant epithelial casts. The pulse was increased 10 to 20 beats, and the temperature was a degree above normal in the morning and 2 degrees in the afternoon. Respiration remained normal. The febrile condition subsided after one week. In the meantime the face also became oedematous. From this time on for a month the notable symptoms were the complete motor paralysis, with rapid diminution in the bulk of the muscles affected. The paralysis then seemed stationary for a time, then began to improve, and by the end of the fifth month had almost recovered. This case is typical of several others that occurred at the same time.

Case 3, medium grade. L. F. (white), age 35, epileptic, admitted to the hospital in 1890. September, 1895, his general health was below the normal standard, he had patches of eczema on different parts of his body, was saturated with the bromides, presenting the bromide eruption. The legs became oedematous painful and hyperaesthetic, followed by symptoms of incomplete paralysis. There was want of proper co-ordination in standing with closed eyes (not the case before or after recovery) and difficulty in walking, or standing. The knee reflexes were abolished. Constitutional disturbance was mild, the temperature not going higher than 1 degree. The motor and sensory symptoms were never more pronounced at any time than has been described. The urine contained epithelial casts. Recovery took place in two weeks. This case is typical of the majority of those observed, but there were others of yet milder character than the last. In these the symptoms consisted of slight oedema of the ankles and slight difficulty of locomotion, with a general feeling of hebetude and indisposition, but no abnormal rise of temperature. These cases, but for the circumstances surrounding the development, or, in other words, but for the company they were

in, would doubtless have been overlooked entirely, or if noticed, would not have passed for cases of neuritis. In view of the circumstances surrounding these milder cases, together with the sufficiently marked trophic changes in the limbs, there could be no doubt of their identity. But as showing how vague the symptoms of multiple neuritis may be, we will quote the following from Allen Starr:

"There are numerous cases of indefinite nervous symptoms, pain of various kinds, formication and odd sensations grouped under the indefinite term numbness, flashes of cold and heat, accompanied by actual changes in the temperature of the part, or only by apparent vascular irregularities, slight spasms or tremors, functional weakness, with sense of fatigue, not reaching the grade of paresis, and many equally obscure manifestations of disturbed functions in various parts of the body, which receive their best explanation in the theory of multiple neuritis."

It is interesting to note that in every case observed during the endemic of neuritis in which a careful examination of the urine was made, there were evidences of an associated nephritis. We use the word associated advisedly, from the fact that the nephritis was not independent in its nature, but dependent upon the same factors underlying the neuritis, as shown by the nephritis recovering pari passu with the neuritis. We believe there can be no question but that malaria should be set down as a cause of nephritis. The pathological anatomy of the kidney, in malignant malarial hematuria, demonstrates a condition of acute inflammation of the kidney. But it is not our purpose to pursue this thought beyond the point of suggestion. The subject of malaria as a cause of nephritis is an interesting, and we believe, fruitful one for comprehensive study.

The cause of multiple neuritis is always a poison circulating in the blood, hence its invariable bilateral character. There are many well known substances, both organic and inorganic, that are recognized causes of multiple neuritis. Typical of the organic substances are alcohol, living germs and their ptomaines. Of the inorganic, arsenic and lead. In the neuritis, which is sec-

ondary to phthisis, the nerves are not affected by the bacilli directly, but is a ptomaine neuritis. In leprous neuritis, however, the inflammation of the nerves is produced by the direct action of the bacilli of leprosy, as is shown by their being found in the connective tissue of the nerves. In malarial neuritis it remains to be shown whether the nerves are affected primarily by the plasmodium, or secondarily as the result of a toxin, formed during their life processes, or after their decease. It seems probable that the nerves may be affected in either or both of these ways. It is also probable that there are other atmospheric germs capable of producing a multiple neuritis, whose nature have not been discovered. During last year Dr. Hammond, of New York, reported a series of cases occurring in infants in the State of Vermont, and assigns the probable cause as atmospheric.

If malaria is capable of producing neuritis, why is not the latter more frequently met with in malarial districts? This is a question we leave to the erudition of pathologists. There must be, however, a condition of disturbed nutrition in the nerves and likewise of their centers, that predisposes them to be thus acted upon. This is plainly shown in the history of the cases contained in this report. The insane are a class of persons whose nervous systems are profoundly impressed and impressionable, if not absolutely broken down.

Furthermore, the effects of their long confinement, indoor life and comparative routine dietary, are prone to develop general disturbances of nutrition in addition to those primarily of the nervous system. All of our cases of neuritis occurred in patients who had been in the institution for a long time, and who were in a great measure broken down. We heard verbally of similar cases in other asylums at the same time, but have seen no authentic report to that effect. But why should the peripheral nerves be affected exclusively? That such is the case is more apparent than real. It is probable that the entire nervous system is affected to some extent, but the peripheral nerves, being removed from the headquarters, so to speak, that is from the cells of which they are a part, and from the center of

circulation, are prone to bear the weight of the burden. On the principle that when a given cause capable of killing a tree is applied to its trunk the smaller twigs will apparently suffer most.

CONCLUSIONS.

1. Peripheral multiple neuritis of malarial origin is a rare disease.

2. Malnutrition of the general nervous system is a probable predisposing cause.

3. The prognosis is good, both as regards immediate danger to life, and ultimate recovery of cases where the paralysis is very marked.

4. Under like conditions males are more liable to be affected than females.

Dr. Gibson's Resignation.

We publish in this issue a copy of Dr. Gibson's resignation from the editorial charge of the Journal. It will arouse in all the old members of the association a feeling of regret. No man could have met the difficulties of management with a greater degree of success than did Dr. Gibson. There were times of depression, of obstacles in the way of delinquent dues, high postal rates, efforts on the part of advertisers to smuggle notices of unreliable preparations into its columns, there were duties in the shape of exposing irregularities in our own profession. The doctor has met all these things in a way that has entitled him to the lasting gratitude of the profession of the State. He has kept the pages of the Journal clean, fearless and outspoken for all that is best in medicine. The Society parts with his services as an officer who has served unselfishly, and well.

THE

JOURNAL

OF THE

ARKANSAS MEDICAL SOCIETY.

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All communications to this journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested. Contributors desiring reprints or extra copies of the JOURNAL must notify the editor when their papers are sent to the JOURNAL.

The Journal disclaims all responsibility for the views expressed by contributors and correspondents.

Address the Editor, F. Vinsonhaler, M. D., Masonic Temple, Little Rock, Ark.

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Editorial.

Card From Dr. L. P. Gibson.

LITTLE ROCK, ARK., Dec. 1, 1896.

Dr. A. J. Vance, President, Harrison, Ark.

DEAR DOCTOR:

As foreshadowed in the report of the trustees of the Journal, made at Fort Smith, it was decided to be for the best interest of the society to suspend the publication of the Journal for a short time on account of the temporary inadequacy of revenue.

It appears now that it will be feasible to permanently resume publication with the beginning of the new year. I believe the objects for which our Journal was established and has been maintained can the more readily be attained by having the editorial management of the Journal in the control of the secretary of the society. This is all the more apparent when it is realized that never before have we been so fortunate in having a secretary so well equipped for the multifarious duties pertaining to the management of a publication conducted as ours necessarily has to be. The break in the publication, and its early resumption under favorable auspices, affords an opportunity that I have long sought to retire from its editorial management.

I feel that mine will be the only loss in parting from those close relations by which I have been so long and pleasantly connected with the medical profession of our State.

In the future I shall always be a willing, and I hope no less effectual, worker for our Journal, our society and our profession.

Yours truly, L. P. GIBSON.

Needed Medical Legislation.

The present medical law of the State of Arkansas is probably the worst one that has been placed upon the statute books of any State in the Union in recent years. Members who voted for it said so. It became a law because its author entered into a sufficient number of combinations to insure its success. There is not a single feature in its inception, passage or execution that can save it from condemnation. It is a disgrace to the progressive people of the State. Governor Clarke placed his official disapproval upon it, and had the medical profession stood solidly together and worked for its defeat, it might not have been passed over his veto. The legislature, which will assemble in January, let us hope, will undo the work of its predecessor and give us such legislation as will protect the lives of our citizens, not only by giving us a good law regulating the practice of medicine, but by appropriating funds for a State Board of Health.

The fulfillment of these hopes rests with the profession throughout the State. They should make their influence felt. The members of the legislature are open to any suggestion coming from their own constituents, and peculiarly suspicious of any measures which receive support from persons living in large cities. But the old family physician can, by a few words, win his own representative to the side of the medical profession, and altogether, with a long pull and a strong pull, we will get an honest, sturdy expression of the best medical men of the State. If this occurs no one can doubt the result. We will get a good code of medical laws.

The Appointment of Dr. P. O. Hooper.

By a unanimous vote the State Board of Charities elected Dr. P. O. Hooper to the post of superintendent of the insane asylum. Previous to the election the board were in receipt of communications from prominent members of every profession and calling in the State, asking for the appointment of Dr. Hooper. The demand was so general that it was not a surprise to the public when the result of the election became known.

The public institutions ought to be under the supervision of skilled men, and above the influence of wire-pulling. When the people of the State arise to the importance of this question, professional standing and competency will be insisted upon. Dr. Hooper does not require any introduction to the people of the State. The Journal extends its congratulations to the doctor and to the people.

To the Profession.

With this issue of the Journal of the Arkansas Medical Society the writer assumes editorial charge of its columns. It is the intention of the trustees to continue the publication from this time on without intermission. The troubles of the Journal have been many, but owing to the determination of its former editor its issuance has been pretty continuous from the first. In this work we ask and expect the cordial assistance of the profes-

sion of the State. No journal can fail with the support of the society, and if the present industrial depression shall pass away, as we believe it will, it is possible that the financial aid will be forthcoming which will place the Journal where it will cease to be a burden upon the shoulders of the society, and will become self-supporting.

The suspension of the Journal for the past few months has been practically unavoidable. The reduction of the annual dues left a deficit in the treasury, and the publication was necessarily discontinued for the want of funds. At the Fort Smith meeting the dues were again raised, but too late to undo the harm already inflicted. We shall not despair, however, of ultimately making the Journal self-supporting, and with this end in view shall concentrate all our energies toward its accomplishment. We begin the new year with the hope that it will be a prosperous one for the Journal, for the society and for the profession of the State. Fraternally,

DR. F. VINSONHALER.

Editorial Notes.

Dr. D. J. Prather, who for years has been a prominent practitioner in this city, leaves shortly for Mexico in search of new fields.

Dr. T. E. Murrell, formerly of this city, is now in Denver in the practice of his specialty. His friends will be gratified to learn that the doctor has in a great measure regained his health. He expects to make Denver his permanent home.

Dr. Jno. R. Murray, of Tennessee, has associated himself with Dr. C. S. Gray in this city. The doctor has been fortunate in capturing one of our most estimable young ladies. The Journal extends its congratulations and best wishes to the doctor and his wife.

At the annual meeting of the Little Rock Medical Society Dr. E. R. Dibrell was elected president, Dr. A. R. Howell, vice

president; Dr. F. Vinsonhaler, secretary; Dr. J. H. Southall, treasurer. The secretary and treasurer were elected after an exciting ballot, during which the most modern and radical election methods were resorted to. The society meets the first and third Mondays in each month, and invites all visiting physicians to be present.

Dr. F. L. French has been appointed to the chair of Materia Medica in the Medical Department, A. I. U. The doctor is an alumnus of the college, and has been city physician of Little Rock and a member of the pension board for years. Dr. W. H. Miller has been made professor of obstetrics, an honor for the young doctor. The college is now in the most prosperous condition it has known for years. The opening of the Logan H. Roots Hospital will place it upon a better footing than ever. The adoption of the four years course has increased rather than diminished the attendance.

Obituary.

Dr. J. J. McAlmont.

Dr. John Josephus McAlmont was born in Hornellsville, N. Y., December 19, 1821, where he was raised and educated. His father died soon after his seventeenth birthday, and leaving his mother and the younger children in possession of the homestead farm, he henceforth supported himself by teaching. He was preparing for college at the time of the death of his father, but this plan had to be given up, and he paid for one course of lectures at the medical college at Geneva, N. Y., in the winter of 1843 and 1844. After this course of lectures he was invited by the citizens of "Kendall Creek," now known as Bradford, Pa., to locate among them, and there he went in April, 1844, making the trip from Hornellsville on horseback. The place was then owned by a company of Boston capitalists, a few of whom resided there, mainly engaged in the lumber trade, as the country was then a virgin forest. The future prosperity of the place seeming very remote, he concluded to go further West,

and removed to Weymouth, O., in January, 1845. Here he met with great success from the first, and returned to New York for his promised wife, Miss Martha J. Gregg, whom he married October 1, 1845. Weymouth was the birthplace of his two daughters, Myra and Cresida, only one of whom, Myra, lived to maturity, and survived him. In the winter of 1848 and 1849, he attended the medical lectures at the Western Reserve College, of Cleveland, O., where he graduated in 1849.

The piercing winds from Lake Erie were very trying to the health and Dr. McAlmont concluded to go further South, but stopped at Cincinnati, and spent the winter of 1849 and 1850 there. Here an old physician offered him an excellent partnership, and he had almost determined to accept the offer, when, at a drug store which he frequented, he chanced to meet Mr. Caleb Langtree, who was then in that city attending to the printing of his map of Arkansas, which was the first accurate map of the State. Mr. Langtree descanted so graphically on the advantages of a residence in Arkansas that Dr. McAlmont determined to go to that State, and packing his household effects, with his family, left Cincinnati, by boat, and in eight days reached Little Rock, March 10, 1850. Here he spent a few days and then proceeded to Benton, Saline County, where he practiced his profession for two years. He then settled in Little Rock, continuing his practice for two years. In 1854 he embarked in the drug business with Senator Solon Boarland, and continued in that business until 1883, with three short intermissions, in 1861, and again in 1867, moving to the country, and in 1869 he tried practicing medicine in Hot Springs, Ark., each time continuing his interest in the drug business in Little Rock. He embarked his fortunes with the South in the late war and lost almost everything he owned.

He was elected mayor of Little Rock in 1866, at a time when it was said that there was not another rebel that the blacks and whites of opposing politics would have voted for. When asked if he would serve, he said: "If I am elected I will serve, but I will do nothing to get the office," and he went about his usual duties, leaving the people to elect whom they might. It was during his administration of this office that the first steam fire engine of Arkansas was ordered for Little Rock.

He was the president of the first Pharmaceutical Association in Arkansas, having become a member of the National Association in 1871.

He resumed the practice of medicine, with which profession he had always kept in touch, in 1883, and continued in the active work until the day of his death, September 24, 1896.

At the opening of the Medical Department of the Arkansas Industrial University at Little Rock, he became Professor of Materia Medica and Therapeutics, which position he continued to fill until his death, having also served as treasurer of this college for many years.

He was one of the original trustees of the St. John's College, a Masonic institution which was in operation here before the war. This position he held until the close of the college, and a similar position as director of the Arkansas Female College, opened in 1874, he held up to the time of his death. He was appointed trustee of the Blind School in 1874, and also served as physician for four years for this same institution, and filled many other positions of trust in his church and societies, but not of profit. Among these the Masons must not be omited, as he was a Knight Templar and of the thirty-second degree. He was a member of the Little Rock Medical Society, of the State Medical Society and of the American Medical Association at the time of his death.

When Dr. McAlmont came to Arkansas there were few public highways and fewer roads in this State suited for vehicles of any kind. Deviating from these roads, one soon found himself surrounded by pathless forests. New as he was to the country paths he sometimes lost his way, or darkness coming on, could not distinguish the road, and then with his old-fashioned long cloak for a bed and his saddle for a pillow, he spent the night as best he might, till the sunlight guided him on his journey. In those days a ride of twenty-five miles through the forest was considered nothing unusual, and after Dr. McAlmont settled in Little Rock he often rode to Natural Steps, Maumelle, Perryville and down the river near Plum Bayou and out in Saline County, nearly to Hot Springs, a distance of more than forty miles. These long rides were all on horseback, and some of them consumed two days and a night. He has often told me that in those days he

carried a package of green tea in his vest pocket, and when he became exhausted he would chew a little of this tea, which was his only stimulant, as he neither drank whiskey, chewed tobacco, nor smoked. But these long rides over-taxed his strength and brought on a severe illness, and it was on his recovery that he embarked in the drug business.

Many were the changes that he lived to see in old Arkansas, and more immediately in the city of Little Rock, during the forty-six years he had lived in the State. When he settled in Little Rock it was a village of 2,000 inhabitants, whereas it now contains about 35,000.

Dr. McAlmont and wife lived to celebrate their golden wedding, and he to pass his seventy-fourth birthday, but of the many friends he made in 1852 in Little Rock, but few survived him, and of these fewer still of his own sex. I will mention those I recall: Messrs. James A. Henry and David Bender, Mr. and Mrs. James Allen Martin, Mr. and Mrs. John Knight, Dr. and Mrs. Wm. Cantrell, Gen. and Mrs. Churchill, Messrs. John and Nick Peay, Bragg and Haynie, Mesdames Dotter, James, Marcus, Barber, Reardon, Peyton, Peay, Adams, Weaver, Joshua Green, Osborne, Morrison, Danelly and Reider.

At the time of Dr. McAlmont's settlement in Little Rock there were seven physicians in active practice. They were Drs. Burton, Watkins, Webb, Gibson, Sizer, Peyton and Cantrell. Another, Dr. Laurie, died the very day he arrived in the town. All those mentioned have preceded Dr. McAlmont, except Dr. Cantrell. All the other friends and acquaintances have passed on before, and he, no doubt, felt lonesome, as he missed "the old familiar faces." But he was ever a man of many resources within himself and devoted to study, not simply of those branches bearing on his own profession, such as chemistry, botany, etc., but study in its broadest sense, and by this means he kept step with the march of modern progress and research, improving his mind to the last days of his life.

He was a man who attended strictly to his own business, never meddling with that of others, never self-seeking, but ever willing to take responsibility, if called upon to do so, and he was a shining example of what a chivalrous Christian physician and Knight Templar should be in every-day life.

The Arkansas Medical Society.

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The *Place* of Meeting—Little Rock, Ark.

The *Time* of meeting—Second Tuesday in May, 1897.

County Societies.

Roster of County Societies.

COUNTY.	MEM'S	PRESIDENT.	SECRETARY.	MEETING PLACE.	STATED MEETINGS.
Ashley	5	I. J. Newton, Hamburg	J. W. Simpson, Berea	Hamburg	
Benton	22	W. G. Floyd, Bentonville	C. E. Hurley, Bentonville	Bentonville	Bimensal.
Boone	16	J. T. Tipton, Lead Hill	L. Kirby, Harrison	Selected by vote of society	Quarterly.
Carroll and Eureka Springs		R. P. Moore, Oak Grove	L. W. Weaver, Eureka Springs	Eureka Springs	Quarterly.
Garland Hot Spgs Med So	16	H. P. Collings, Hot Springs	E. C. Hayes, Hot Springs	Hot Springs	Monthly.
Independence	23	T. J. Woods, Batesville	J. W. Case, Batesville		Quarterly.
Jackson	15	J. M. Green, Newport	J. M. Jones, Newport	Newport	Monthly.
Jefferson	30	J. W. Withers, Pine Bluff	J. P. Runyan, Pine Bluff	Pine Bluff	Monthly.
Lawrence	14	N. R. Townsend, Black Rock	Albert Thornburgh, Sedgewick	Selected	Monthly.
Mississippi	5	W. R. Harrison, Bardstown	C. A. Turner, Osceola		
Phillips		D. A. Linthicum, Helena	M. Fink, Helena		Monthly.
Pope	10	L. T. Ragsdale, Pott's Station	J. A. Westerfield, Atkins		
Prairie	8	F. A. Hipolite, DeVall's Bluff	J. R. Lynn, Des Arc	Des Arc	Annually.
Pulaski L. R. Med. So.	45	A. H. Scott, Little Rock	F. Vinsonhaler, Little Rock	Little Rock	First and third Monday of each month.
Saline		D. N. Fisher, Benton	J. M. Phillips, Bryant	Benton	
Sebastian	26	E. G. Epler, Fort Smith	J. D. Southard, Fort Smith	Fort Smith	Every second Tuesday.
Washington		John Young, Springdale	T. W. Blackburn, Fayetteville		

Miscellany.

Roentgen Rays in Gynecology.

Dr. A. Shuecking (Centrlblt. f. Gyn.; Medicine) comments upon the value of the discovery applied to gynecological and obstetric diagnosis as follows:

The method would be simplicity itself, and the field for scientific investigation would be most extensive, if a recent communication in an English medical journal could be believed. In this paper the outline pictures taken by means of the X rays clearly show small foreign bodies in the vertebral column of a man. Such exaggeration is bound to be discovered sooner or later. Thus far, with the aid of the largest Ruhmkorff's spark inductor, it has been impossible to penetrate muscular or other layers of tissue of more than fifteen centimeters' thickness in such a way as to obtain useful pictures. Some operators succeeded in securing good outline pictures of the extremities through the above-mentioned thickness, but only after exposure for nearly an hour. Thus far it has not been possible to photograph the lesser curvature of the stomach. One difficulty lies in the necessity for a long exposure. To obtain an outline picture of the hand, an exposure of half an hour is necessary, and for the abdominal organs a much longer time would be required, and, of course, the subject must be immovable during this time. During long exposure the vacuum tubes become useless, either because air enters the tube or by the consumption of the minimum of air that remained after the exhaustion. It is well known that not all of Hittorf's vacuum tubes are fit for these experiments. Often if a clear blue cathode light has been obtained and the glass plane opposite to the cathode disk fluoresces with the most beautiful green-white light, a satisfactory result is not obtained.

If at present we are unable to obtain pictures of the pelvic organs, still it will be worth much to obtain pictures of the development of the fetus, and also of organs and tumors separated from the surrounding tissue.

Since writing the above the proceedings of the Medical Section of the Royal Prussian Ministry of War have appeared, and in them is to be found an excellent picture taken by transmitted light of a fetus in utero in the fifth month. This picture gives a perfect view of the process of ossification going on in the skeleton. The transparency of the hyaline cartilage is very clearly shown. The position of the fetus is well defined, and that is of great importance. The improvement in the instrument has been very great, and we are convinced that gynecology will yet receive its share of this great discovery.

Surgery for Typhoid Perforations.

BY JOSEPH PRICE, M. D., PHILADELPHIA.

[Read Before the Philadelphia County Medical Society, October 28 1896.]

I submit the following report of cases operated on for typhoid perforation for the lessons they may convey and will discuss them from the standpoint of our more recent experience.

Case 1. Mrs. A. O., aged 30, having several children, but without a history of miscarriages, was admitted to the hospital on October 2, 1896. She was seen by Drs. Hughes and Owens in consultation after some three weeks of illness, with a typical history of typhoid fever. Operation was performed on October 1. Symptoms of perforation were present, with well-localized attacks of peritonitis and an irregular and ill-defined tumor on the right side. Omentum and small bowel were found adherent in the region of the ileo-cecal valve. The adhesions were easily freed and two perforating ulcers, six inches apart, were found. The lower one situated a few inches from the valve, was large, irregular and necrotic; the second one was higher up in the bowel about one-half inch in length, well defined and less healthy in appearance.

A puddle of filthy fluid was found about the perforations and the omentum and appendix were also involved in the adhesions. The infected portions of the omentum and appendix

were removed. The holes in the ileum were trimmed and sutured and an irrigation toilet was followed by both glass and gauze drainage. The mesenteric and retroperitoneal lymphatics were generally enlarged and easily recognized by touch and sight. Recovery ensued without a hitch.

Case 2. Mrs. B. K., a married woman, aged 26, with two children and a history of one miscarriage, was admitted to the hospital on June 4, 1896. She had a rapid pulse and high temperature and appeared to be in a decided septic condition. Peritonitis was quite general and alarming emaciation had taken place apparently as a result of some lung trouble. Section was made on June 5. General adhesions were found in the region of the ileum and right groin. When all adhesions had been freed, a large, ragged perforation was found in the ileum, with circumscribed accumulation of bowel contents. The perforation was trimmed and sutured. After an irrigation toilet, glass and gauze drainage were provided. Recovery followed. For two days following the operation the pulse remained high and feeble. The temperature also was high, and this was considered rather favorable. This patient had been very ill for two weeks before admission to the hospital. The character of the ulceration was doubtful, as there was tuberculous trouble in the lungs. The closure of the fistula after suturing is rather against tubercle, as tuberculous fistula rarely close by suture.

Case 3. Mrs. R. B., a married woman, aged 28, without children and without a history of miscarriages, came under observation after three weeks of illness and treatment for typhoid fever. She was admitted to the hospital on January 5, 1895, and went into collapse soon afterward, being unconscious at the time of the operation. On January 6, section was undertaken, freeing all adhesions, stitching multiple bowel-fistula, detaching lymph from the bowel with gauze. There was a general angry peritonitis, with filthy bowel contents, and filthy inflammatory products throughout the peritoneal cavity. Gaseous distention was marked and the peritoneum had a decided fecal odor.

Thorough irrigation and drainage were practiced. I never attempted to close a filthier peritoneal cavity than this, either antemortem or post-mortem. Recovery followed. There were present at the operation Dr. N. Fred Essig, of Spokane, Wash.; Dr. Samuel S. Q. Robinson, of the United States Army; Dr. Harold Bunn, of California; Dr. John F. Roeder, Dr. H. S. Lewers and Dr. Garden, of Philadelphia.

Notwithstanding the great progress medical and surgical science has made, typhoid fever continues to present many complex and difficult questions. It must be classed among the most grave troubles with which the profession has to deal. Little is known about the disease, other than of its more objective symptoms. There is no exactitude or certainty in its treatment, which is rarely the same by any two physicians. The treatment begins with guesses and grows into some degree of certainty only as conditions improve. I will not attempt to deal with the larger circle of facts connected with typhoid fever, but will restrict my discussion to the surgical treatment of typhoid perforation.

Again, we have a wide divergence of opinion as to the propriety or wisdom of operation. There is no very general accord of opinion as to prognosis or the definiteness and reliability of symptoms—as to reliable evidence of perforation—nor is it agreed that all these cases prove fatal.

Dr. Reginald H. Fitz, of Boston, has furnished valuable data as the result of a study of the work of the earlier investigators as to the fatality of typhoid perforations. Louis, Chomel and Jenner have reported numerous cases of typhoid perforation, but none of recovery. Tweedle says: "Intestinal perforation is always fatal, generally within thirty-six hours." Some more recent authorities make more favorable reports, others agreeing with the earlier authorities as to the almost certain fatality.

Griesinger holds that there is a possibility of the healing of a perforation and of recovery "never in cases of general peritonitis, only when the inflammation is wholly circumscribed. The rare exceptions are hardly worth considering in connection

with the prognosis, which is to be regarded as almost fatal when the symptoms of perforation are distinct, and as absolutely fatal when gas is present over the liver." Murchison, who has contributed much that is valuable to the literature of the subject, says that "rare cases are met with where recovery ensues after all the symptoms of peritonitis from perforation." Dr. Reeves reports that: "I have seen in five instances all the symptoms which announce and follow perforation of the bowels, yet the patients recovered." Dr. Loomis, in discussing the subject, says: "I do not remember to have seen a single recovery after there were unmistakable evidences of intestinal perforation. Recovery from a local peritonitis complicating typhoid fever is not uncommon, but when the characteristic symptoms of intestinal perforation are present, in my experience, a fatal issue soon follows." So we have the weight of authority on the side of almost certain fatality.

In the reported cases due allowance must be made for errors of diagnosis. In many of these cases the diagnosis was not made until post-mortem examination revealed the characteristic typhoid lesions. Had recovery taken place, much doubt would have remained in the mind of the operator as to the real nature of the perforation. We know that typhoid perforations are the most common variety of perforations, and the perforation is usually in the ileum.

As to the mortality in cases of the perforation of the bowel, Dr. Osler gives recent statistics: "In 114 cases of the 2,000 Munich autopsies (5.7 per cent) and in fourteen instances in my series, the intestine was perforated and death caused by peritonitis. The perforation may occur in ulcers, from which the sloughs have already separated, or it may be directly due to the extension of a necrosis through all the coats. In only a few cases is the perforation at the bottom of a clean, thin-walled ulcer. In one instance the perforation occurred two weeks after the temperature had become normal. The sloughs were, as a rule, adherent about the site of the perforation. A majority of the cases were in small, deep ulcers. There may be two or even

three perforations. The orifice is usually within the last foot of the ileum. In only one of my cases was it distant eighteen inches. Peritonitis was present in every instance.

Hemorrhage from the bowels occurred in ninety-nine of the Munich cases and in nine of my series. The bleeding seems to result directly from the separation of the sloughs. I was not able in any instance to find the bleeding vessel. In one case only a single patch had sloughed and a firm clot was adherent to it. The bleeding may also come from the soft, swollen edges of the patch. Peritonitis without perforation may also occur by extension from the ulcer, or, occasionally, by rupture of a softened mesenteric gland. It was present in 2.2 per cent of the Munich autopsies.

The question is direct. What chances does surgery offer? The one and only chance left. We know the almost inevitable sequel in one case and something of the possibilities in the other. The one means death, the other gives a chance of recovery. The error, to put it mildly, consists in abandoning these cases as absolutely hopeless, when there is yet one last resort—surgery—which furnishes precedents of encouraging success. I am not venturing upon entirely new ground. Dr. James C. Wilson, the honored president of this Society, a clinician of wide experience, stands among the first, if not the first, to advocate, in clear, unequivocal language, surgical dealing in these cases. Dr. Hunter McGuire, of Richmond, Va., a worthy supporter of the fame of the old school of surgeons, recommends the tying of vessels to control hemorrhage from ulcers in typhoid fever. He recognizes that too many are lost from this cause and suggests an original and ingenious method of suturing to control the hemorrhage and avoid necrosis. We are slow in following the lead these men take, slow and hesitating in adopting their urgent suggestions, in coming down from our theoretical lofty height. All our surgical procedures have made their way in the face of relentless criticism and opposition. Surgical interference, in cases of typhoid perforation, has not proved an exception. Largely, the difficulty lies in timidity, and oversensitiveness as to profes-

sional repute. The protective character of adhesions are often misleading, tending to lull apprehension as to immediate existing risks to life. The condition is too frequently classified for noninterference—left to the processes of nature—when parts are weakened and poisoned beyond the kindly healing and remedial processes of nature. We find, occasionally, recorded deaths from spontaneous perforation due to chronic local peritonitis. The history may be that of localized attacks of peritonitis—with doubtful evidence of perforation—the localized attack resulting simply in adhesions about the ulcer. If the adhesions are well-formed, the escape of gas and bowel contents will be limited when perforation occurs.

The patching or fortification by adhesive and protective peritonitis, avoiding acute general peritonitis and sepsis, gives us the most favorable class of cases for surgery. Localized peritonitis, with adhesions, with or without perforation, around an ulcer, with sufficient adhesive and inflammatory product to form a small tumor, is quite easily recognizable in an emaciated patient. An eminent surgeon says, in connection with these cases, that which cannot be accepted as safe dictum:

"Surgeons are not justified in performing laparotomy for the suturing of perforated typhoid ulcers, if circumscribed peritonitis of an adhesive or protective character exist, or is in process of development."

The trouble, as with all intestinal affections, is a hidden one, not one directly addressed to our vision. We cannot determine with any large degree of certainty, even from a few marked objective signs, the extent of the protective character of the adhesions, nor determine anything certain as to the character or extent of the process of development. We know the sequence in the majority of these cases where there is no interference. Perforations or fistulae due to ulceration and sloughing rarely close. Almost all such ulcers are surrounded by adhesions, with pus, bowel contents, fistulae and fistulous openings. Complications become general, keeping the patient in a miserable condition: emaciated and anxious, with a rapid pulse, cold, clammy

and greatly wasted. Fistulae of viscera, due to incision or surgery, commonly closes spontaneously. Not so, however, when due to sloughing. Unfortunately, we are not always aided by the clinical history in our diagnosis. We are directed or guided largely by the patient's general condition, the peritonitis or the small and ill-defined tumor.

There is but little difficulty in settling the fact that the patient is dying of some intra-peritoneal lesion. Errors are rarely made in opening the abdomen. Suture methods for repair, after careful trimming of the ulceration, give the most pleasing results. Excisions or resections have nothing to recommend them. The open treatment, when the conditions are desperate, and sepsis and bowel distention very marked, favors peritoneal and bowel drainage of all contents. An abundance of gauze placed about the fistulae in the shape of a square coffer dam favors simple drainage and avoids contamination. The large mortality has been largely due to clumsy and imperfect work. Everything within the abdomen is intolerant of bungling manipulation. The surgery is not to be gone at with that awkwardness with which a man would try to put his five fingers in a glove with four. The delicacy of the condition of the parts, which the very nature of the disease creates, requires in the surgeon the use of fingers delicate and sensitive of touch and deft in use. The repair of perforations, commonly single, rarely multiple, is easy and should be rapid. There may be some delay in the seeking and finding the point of perforation, but the well-defined nature of the pathological condition at that point is easily recognized by fingers familiar with normal intra-peritoneal conditions. The diviation from the normal can be instantly recognized when the fingers are passed through the viscera without exposure. The cluster of adhesions, omentum and bowel about the perforation are easily freed. The cleansing, local and general toilet, are of great importance. Rarely do we find distention associated with perforations, except in the delayed cases, on the third or fourth day after perforation.

In delayed cases the mass is well marked; paresis of the bowel with over-distension is prominent. The characteristic fecal odor is recognized at once upon opening the abdomen. This is most marked in the acute cases in those dying soon after perforation. If the adhesions are well formed about the perforation, a fecal odor is rarely present. When patients are under observation, the diagnosis made early, the disease running a uniform course with a definite train of symptoms, the characteristic morning remissions and evening exacerbations, and about the third week a copious intestinal hemorrhage takes place with the patient sinking into fatal collapse, with a quick pulse, sub-normal temperature, the symptoms admit of but one interpretation, and point to but one possible source of relief.

In the very nature of things, from the very character of the trouble and the parts attacked, the mortality will always be large; but some can be saved. The stimulus of anaesthesia increases the force of the pulse, the patient's respirations deep, and at the completion of many of these operations the patient's general condition is often better than before the operation. An irrigation toilet, aside from having great value for cleansing, is a stimulant to the solar plexus and favors reaction.

The same principles apply in these cases of typhoid perforating ulcers that apply in cases of general septic or purulent peritonitis and to stab wounds and gunshot wounds. The words of Dr. D. Hayes Agnew, who, in his day, was the sovereign spirit of American surgery as applied by him to gunshot wounds of the abdomen, apply with equal appropriateness to typhoid perforations. He says:

"I want to place myself upon record, for I have very strong convictions with regard to laparotomy. They amount to this: If there is a reasonable degree of evidence that there is a penetrating abdominal wound, especially if a shot-wound, it is our duty to open the abdomen, to make an exploratory incision. We are not to be deterred by the possibility of some legal technicality, if the case should come into court. We are to do our duty without reference to consequences."

I will quote extensively from Dr. J. C. Wilson, for nothing better has been said upon the subject:

"I take it for granted that almost every case of free extravasation of intestinal contents, however small in amount, into the peritoneal cavity terminates fatally. There is little reason to believe that any case of this kind recovers. It is important to note that the cases of peritonitis in enteric fever in which recovery is possible can be clinically distinguished from those which will terminate rapidly in death. The clinical picture of the two conditions is almost as distinct as are the pathological lesions. Where there is extravasation of the intestinal contents into the peritoneal cavity, the collapse is like that caused by the escape of an amount of foreign matter, the result of a perforating gunshot wound of the intestine. The proposition which I submit for discussion arises directly from a consideration of the matter in this way. Until within a few years, no surgeon realized the possibility of treating cases of gunshot injury of the abdomen with perforation of the intestine and the escape of blood and fecal matter by the operation of laparotomy, washing out the peritoneal cavity, excising bruised and lacerated portions of the intestine, and bringing the parts together by suture. Yet this is now the recognized procedure in such cases, and has been of late practiced in many instances with success in cases that, under the old plan of opium and expectancy, would have inevitably perished.

"Are we ready to adopt the same measure in perforation of the intestine with similar conditions as regards the peritoneal cavity, and a like helplessness as regards cure by opium and expectancy in our cases of enteric fever? Recognizing the two groups of cases I have described, and being, as we are, able to refer almost all cases to either one or the other of them within a few hours of the development of the symptoms, are we prepared to decide—and to do so with the necessary promptness—upon those operative procedures by which alone in the second group the life of the patient may be saved?

"Granted that the chances of a successful issue are heavily against you; that the patient is in the midst or at the end of a long sickness; that his tissues are in the worst state to stand the injuries of the surgeon's knife; that the lesions of the gut may be very extensive; that the vital forces are at the lowest ebb. No one yet has hesitated to perform tracheotomy in the laryngeal complications of enteric fever, which require it to save life, for these reasons."

The operative treatment of purulent peritonitis has been performed many times successfully by the gynecologist in conditions scarcely less unpromising. In point of fact, the objections that may be urged against laparotomy in intestinal perforation in enteric fever are no more forcible than those which would have been made use of at first against the same operation in gunshot wounds of the abdomen. The courage to perform it will come of the knowledge that the only alternative is the patient's death. Dr. Wilson, with his advanced pioneer views in this connection, does not furnish the first illustration of the physician taking the lead of the surgeon, furnishing the guiding, the impelling thought, not infrequently the courage.

About seven years ago the American Surgical Association and the Association of American Physicians discussed, at the same time and in the same building, the relative merits of surgical and nonsurgical interference in appendicitis, the medical body deciding in favor of prompt operative interference, the surgeons for delay. Almost coincident with Dr. Wilson's advocacy of celiotomy for the relief of intestinal perforation in typhoid fever, Dr. Lewis S. McMurtry, of Louisville, Ky., performed an operation, the subject being a physician, and found multiple perforations. He trimmed the holes, closed them with sutures irrigated and drained, recovery following. A report of this case, with the patient present at the time, was made at the Cincinnati meeting of the American Medical Association.

There is another recorded case—that of McArdle, of Dublin. The history is one of abscess and multiple perforations fol-

lowing an accident, occasioned by jumping from a wagon. The accident is not a very satisfactory explanation of the trouble in this case. The evidence better supports the conclusion that the case was one of walking typhoid fever with multiple perforations. I might refer to cases in my own experience and that of others, in which the history was doubtful. A considerable number of operations for circumscribed abscess have been reported as successful. Many of these cases are quite as questionable in their history as are those for which post-mortem operation has been done or refused.

In this connection Fitz says :

"Although the reported instances of the successful results of an operation for the cure of circumscribed peritonitis in typhoid fever are comparatively few, I have been able to collect a considerable number in which recovery resulted from resolution or from the spontaneous evacuation of the inflammatory product. In seventeen cases of recovery by resolution the peritonitic attack began in the second week in one, in the third week in eight, in the fourth week in one, in the fifth week in one, and in the sixth week in two. It began at the end of the fever in one, and during convalescence in three. Recovery took place in a week in one, in two weeks in three, in three weeks in two, in four weeks in one, and in two or three months in three. The length of time necessary for recovery in the remaining cases was not stated."

It is a mistake, on the part of gynecologists and obstetricians, to apply the term typhoid fever to certain septic conditions. The sponge-tent, the curette, the sound and a variety of minor gynecological operations have been followed by septic conditions and abscesses, frequent pulse, high temperature and diarrhoea—simulating typhoid fever.

Obstetricians are in the habit of reporting septic cases under the head of malaria. The recorded mortality is largely from the prolonged anesthesia of a patient already enfeebled and with a greatly weakened heart, and the great length of time taken in the operations. They will not stand prolonged anesthesia or a

prolonged operation. In a large percentage of those dying after long anesthesia and operation, death is due to causes within the surgeon's control.

One of the common causes complained of is that of weak, unhealthy tissue, and the yielding of sutures. Herein lie two errors—the choice of needle and that of suture material. The best needle is that from the woman's sewing case—a fine, round needle, and O or OO Chinese silk.

Early diagnosis, early operation, painstaking, rapid work, will save many lives.

Courage goes hand in hand with reverence for human life. There is much force in what Napoleon said to Las Casas: "As to moral courage, I have rarely met with 2-o'clock-in-the-morning kind. I mean unprepared courage, that which is necessary on an unexpected occasion, and which, in spite of the most unforeseen events, leaves full freedom of judgment and decision." It is 2-o'clock-in-the-morning courage we need—the factor that goes largely to settle the result in many surgical cases for us is the lost quarter of an hour.—Maryland Medical Journal.

Ruptured Ectopic—Gestation Sac.

BY A. BROTHERS, B. S., M. D.

A young woman of about 30 years of age, separated some three years from her husband, had been brought to Beth Israel Hospital the morning of October 7 with the diagnosis (made at her home by Dr. B. Gordon and Dr. I. Barsky) of ectopic gestation. Excepting a history of eight weeks' menstrual cessation, followed by irregular menstrual flow during several weeks, nothing definite could be made out. Four weeks ago she had applied at a large hospital uptown, but had been refused admission. She had then spent several weeks in one of the city hospitals, situated in the lower portion of the city, but had been discharged unimproved.

I saw her at the time of admission, at 11:30 a. m. Her features were anxious and drawn, her lips excessively pale,

and she was moaning with pain referred to the abdomen. The temperature was 98 degrees Fahrenheit; pulse 80, and of fair volume. The abdomen was distinctly distended. Over both lateral regions, and anteriorly halfway up to the umbilicus, the percussion note was flat. Per vaginam, the cervix was found pushed anteriorly against the symphysis pubis by a liquid exudate, which clearly gave a sense of fluctuation. Later the sound proved the uterine cavity to be empty and increased in depth by an inch or more.

The probable diagnosis of freshly ruptured extra-uterine-gestation sac was made, and the patient sent up to the operating room. In a half hour all preparations had been completed, and with the valuable assistance of Dr. B. Gordon, Dr. L. J. Ladinski and the house staff, I proceeded with the operation.

On opening the abdomen, a large quantity of dark-colored blood with clots made its escape, showing that rupture had taken place some time previously. On introducing the hand the right tube was found to be the seat of a tumor of nearly the size of a small orange. This, with the corresponding and attached ovary, was quickly brought out of the incision and removed in the usual manner. A large rupture was visible, but there was no evidence of a foetus. The abdominal cavity was next explored and the free blood mopped out, and the clots were removed. There must have been over a quart of blood present. After considerable difficulty a foetus of about four months' growth was found in the left side of the pelvis, buried among clots. On its removal there was a persistent oozing of blood from the general peritoneal cavity. This was found to be fresh hemorrhage and was traced to a spot bounded behind by the spine, in front by the omentum, above by intestine, and below by the affected tube. This had evidently been the site of the placental attachment of the abdominal pregnancy which had formed after the tube had ruptured. In other words, the ectopic sac, originally tubal, had ruptured, and had become converted into an abdominal one. On tamponing with iodoformized gauze strips all hemorrhage was controlled. The patient was then given a subcutaneous salt in-

fusion, and some of the same solution was freely used in the peritoneal cavity to wash out clots. The time occupied by the operation was nearly an hour. At its end the patient's condition was quite fair, the pulse ranging between 120 and 130. Five hours later, when I saw the patient, her condition was fairly satisfactory. The pulse was still about 130, but of good volume. There had been no vomiting, and pain was only moderate.

The specimens showed a foetus about four inches in length, a placenta, an umbilical cord, and the ruptured tubal sac with its corresponding adherent ovary.

Further Investigation of Eucain Hydrochlorate as a Local Anesthetic.

G. W. SPENCER, M. D., PHILADELPHIA.

Since the recent report made on eucain hydrochlorate, * further observations have been conducted upon many new cases in which eucain was used as the means of inducing local surgical anesthesia. All who have tried eucain, and all who have seen its anesthetic effect agree with the following statement which we made in the former article: "Eucain is a valuable addition to our resources. It is rapid in action, safe, produces positive and prolonged anesthesia, causes no serious after-effects, and can be rendered aseptic by boiling. It is the best local anesthetic before the profession."

In the nose, throat and eye, eucain has given great satisfaction, and operations upon these parts can be performed without a particle of pain. In operationg upon these regions solutions similar in strength to those of cocain may be employed, but we use a much greater amount of solution of eucain than of solution of cocain. There is not much difference as regards the rapidity, intensity and duration of the anesthesia caused by each of these agents. The greatest difference between cocain and eucain, is that eucain can be administered in large doses without danger, while corresponding doses of cocain would put the patient in

deadly peril. Cocain in the hands of not a few, given in very small doses, has caused marked symptoms of poisoning.

A paper was read at the session of the Hufelandsche Gesellschaft, Berlin, April 16, 1896, by Dr. Gaetans Vinci, of Messina, (Duetsche Medicinische Zeitung, No. 34, April 27, 1896,) who says there are some important differences between cocain and eucain. In the first place eucain is less poisonous than cocain. Whilst the animals treated with eucain survived, other animals injected with the same doses of cocain died. The pulse with eucain is always decreased in frequency; with cocain there is a primary acceleration. As regards their local action, the time for complete anesthesia and its duration, there is no difference between the two substances.

Prominent dentists, both in Germany and France, speak highly of eucain as a safe and reliable agent. H. Kiesel Zahnarztliche Rundschau, (Berlin, April 5, 1896), says he has known of eucain since November, 1895, and has used it extensively in dentistry. His results have been so satisfactory with this drug that he has cast aside ethyl chlorid and ethyl bromid. He claims as much as two garms (thirty grains) can be injected without trouble, and says half that quantity would, however, under favorable circumstances, be sufficient to painlessly extract all the teeth. Dr. C. L. Schleich, of Berlin, the originator of the infiltration method of anesthesia, thinks there is not the slightest doubt that eucain is just as efficacious as cocain in causing anesthesia of the mucus membranes. He has used it in twenty cases and has not met with a single case of poisoning. Experiments made upon his own person showed that the anesthesia of the wheals was complete. He says it should replace cocain. American surgeons, dentists and ophthalmologists are rapidly familiarizing themselves with the advantages of this drug.

The following cases will demonstrate the value of eucain hydrochlorate for inducing local anesthesia without producing systemic effects, not only in minor surgical operations, but also in operations of considerable magnitude.

Case 1. Male; operator, the writer. Diagnosis—traumatic gangrene of the little finger. Operation—amputation at the metacarpo-phalangeal joint by the racket method. The wound was closed with eight sutures. Duration of the operation was ten minutes and the amount of eucain used was two drachms of a 5 per cent solution hypodermatically. The patient, when asked afterwards in regard to the pain of the operation replied: "It hurt a little, but I suffered much more before the operation than during it."

Case 2. Male; operator, the writer. Diagnosis—small melanotic sarcoma just above the elbow. Operation—excision, the wound was closed with three sutures. One drachm of a 5 per cent solution of eucain injected around and beneath the growth permitted a painless operation.

Case 3. Male; operator, the writer. Diagnosis—large sebaceous tumor of the neck. Operation—removal and insertion of seven sutures. The operation lasted fifteen minutes and was painless throughout. The amount of eucain was two drachms of a 5 per cent solution used hypodermatically.

Case 4. Male; operator, the writer. Diagnosis—ingrowing nail on the big toe, accompanied by eczema of the adjacent tissues. Operation—extirpation of the outer half of the nail and matrix. Anesthesia induced by the administration hypodermatically of one drachm of a 5 per cent solution of eucain. Operation painless.

Case 5. A private patient of Dr. Savitsky's; operator, Dr. Savitsky and the writer. Diagnosis—paraphimosis and sloughing of the glans penis. Operation—relieved the constriction by three incisions, opened also the purulent area of the glans. The amount of eucain used was one drachm of a 5 per cent solution hypodermatically. The patient had slight pain during the operation.

Case 6. Male; operator, Dr. J. Chalmers Da Costa. Diagnosis—dermoid cyst in the cacral region. The cyst had ruptured, forming a sinus three inches in length, which led from the

sacrum to the surface of the body. Operation—incision and curetting the sinus, removal of the cyst walls, also of some of the periosteum of the sacrum, to which bone the cyst was firmly attached. The duration of the operation was twenty minutes. The amount of eucain was two drachms of a 5 per cent solution, hypodermatically. The wound was closed with four sutures and the operation was entirely painless.

Case 7. Female; operator, Dr. J. Chalmers Da Costa. Diagnosis—chrondroma on the palmar aspect of the hand near the fifth metacarpo-phalangeal joint. Operation—extirpation, gouging the tumor from the metacarpal bone, closure of the wound with seven sutures. This patient was nervous and somewhat apprehensive. She had looked forward to the operation with great dread. One drachm of a 5 per cent solution of eucain used hypodermatically not only permitted a painless operation but seemed to act as a sedative to her excited nervous system.

Case 8. Male; operator, Dr. J. Chalmers Da Costa. Diagnosis—Albert's disease (brusitis of retro-calcaneal bursa and periostitis at insertion of tendo achilles). Operation—incision of bursa, removal of osteophytes from oscalcis, curetting of bursal sac, etc., closure of wound with four stitches. Operation was entirely painless.

Case 9. Female; operator, Professor W. W. Keen. Diagnosis—needle in the hand. The needle was extracted without pain. Ten minims of a 5 per cent solution of eucain was used hypodermatically.

Case 10. Male; operator, Dr. Horwitz. Diagnosis—suppurating bubo. Operation—excision, curetting, removal of a gland and application of pure carbolic acid. This patient had slight pain. The amount of eucain used was two drachms of a 5 per cent solution hypodermatically.

Case 11. Male; operator, Dr. Horwitz. Diagnosis—hydrocele. Operation—opening, drying of sac, application of pure carbolic acid, packing and insertion of two sutures. Two drachms of a 5 per cent solution injected into the tissues permitted a painless operation.

Case 12. Male; operator, Dr. Horwitz. Diagnosis—phimosis and concealed phagedena. Operation—circumcision and

application of pure nitric acid to the ulcer. Two drachms of a 5 per cent solution of eucain injected into the prepuce did not secure a painless operation in this patient. It was not a failure, but was not so successful as usual.

Case 13. Male; operator, Dr. Knox. Diagnosis—traumatic gangrene of the tissues covering the first phalanx of the index finger. Operation—amputation at the middle of the middle phalanx, closure of the theca, stitching the flexor tendon to the periosteum and closure of the wound with five sutures. The operation was painless and the amount of eucain used was forty minims of a 5 per cent solution hypodermatically.

Case 14. Male; operator, Dr. W. J. Hearn. Diagnosis—epithelioma of the forehead. Operation—excision and closure of the wound with four sutures. One drachm of a 5 per cent solution of eucain injected around the base of the growth. Operation was painless.

Case 15. Male; operator, Dr. W. J. Hearn. Diagnosis—thyroid cyst. Operation—a two-inch incision was made over the cyst, cutting layer by layer until the cyst wall was reached. The external surface of the wall was firmly attached to the surrounding tissues by old bands of adhesions, and the base of the cyst was attached to the thyroid cartilage. The cyst was separated from the surrounding tissues and from the thyroid cartilage by means of a dry dissector. The operation lasted twenty minutes. In this case two drachms of a 5 per cent solution of eucain was injected around the base of the tumor, and during the operation small amounts of the solution were dropped into the wound from time to time, amounting in all to one drachm. The result was entirely satisfactory. The patient said he felt "no pain at all." The cyst was the size of an English walnut, and six sutures were required to close the wound.

Case 16. Male; operator, Dr. W. J. Hearn. Diagnosis—fistula in ano. Operation—five minutes after two drachms of a 5 per cent solution of eucain were injected into the sinus, the fistula was incised, curetted and packed without giving the patient any pain.

Case 17. Male; operator, Dr. W. J. Hearn. Diagnosis—empyema. Operation—an incision was made between the sixth and seventh ribs. The incision extended through all the tissues

into the plural cavity. After a pint of pus escaped, a large rubber drainage tube was inserted and the outer end was stitched to the skin. The operation lasted ten minutes and was accompanied by very slight pain. After the operation was over it was found that Dr. Hearn began the operation three minutes after the eucain injection, instead of waiting for the required time of complete anesthesia, which is five minutes. The amount of eucain used was two drachms of a 5 per cent solution.

Case 18. Male; operator, Professor Brinton. Diagnosis —melanotic sarcoma of the neck. Two drachms of a 5 per cent solution of eucain injected around the base and beneath the part removed, allowed a painless operation. This was an incurable sarcoma, and operation was performed simply to rid the patient of an ulcerated mass twice the size of an English walnut. The wound was closed with nine sutures.

Case 19. Male; operator, Professor Brinton. Diagnosis —epithelioma of the lower lip. Operation—excision by a V-shaped incision. The incision passed through the entire thickness of the lip. The mucous membrane was closed with five fine silk sutures, and the edges of the wound were brought together with seven silkworm-gut sutures. Two drachms of a 5 per cent solution were used hypodermatically. The operation was painless.

Case 20. Male; operator, Professor Brinton. Diagnosis —fatty tumor on the forehead. Operation—a two-inch incision was made over the tumor, the tissues were divided layer by layer until the capsule was exposed. The capsule was then incised and the fatty mass removed, and after three ligatures were applied, the wound was closed with six sutures. Two drachms of a 5 per cent solution of eucain were used hypodermatically, and operation was painless from the beginning to the end.

Case 21. Male; operator, Professor Brinton. Diagnosis —large nevus that invaded three-fourths of the upper lip. Operation—the nevus was removed by a V-shaped incision, the apex of which extended one-eighth of an inch into the right nostril. The base terminated at the lower margin of the lip. The base of the part that was removed was one inch in width and consisted of the entire thickness of the lip and a mass of dilated blood ves-

sels. After a number of vessels were ligated, the mucous membrane was sutured with six fine silk sutures and the edges of the wound were brought together with six silkworm-gut sutures. Thus the number of sutures used in the case was twelve. To control the hemorrhage, clamp forceps were placed at the angles of the mouth, and these naturally gave the patient considerable discomfort, otherwise the operation was painless. The amount of cocain used was two drachms of a 5 per cent solution hypodermatically. The duration of the operation was twenty minutes.

Tracheotomy was successfully and painlessly performed in the Jefferson Hospital during the month of October, 1896, on cases 22, 23, and 24 of our list, by Dr. Jones, clinical professor of laryngology in that institution. The anesthesia in each case was induced by cocain. Each patient received three drachms of a 5 per cent solution, two drachms of which were injected in divided amounts above, below and at the sides of the area in which the incision was to be made. The other one drachm was dropped into the wound from time to time during the operation.

Case 22. W. W., male, aged 42. Diagnosis—syphilitic stenosis of the larynx.

Case 23. P. B., male, aged 53. Diagnosis—inoperable sarcoma of the larynx.

Case 24. H. A., male, aged 53. Sarcoma of the larynx.

The operation for each of the above cases consisted in making an incision over the middle line and in the long axis of the trachea. This incision extended from the upper border of the cricoid cartilage downward for two inches, it divided the skin and superficial fascia. The anterior layer of the cervical fascia was then incised and the sterno-thyroid and the sterno-hyoid muscles were separated. In each case the isthmus of the thyroid gland extended well up on the trachea and it was found necessary to incise the fascia which invested it in order to expose the trachea. The said fascia was incised by a transverse incision at the upper border of the cricoid cartilage, and this allowed the isthmus to be lifted and pushed downwards. In each case three rings were incised and a tracheotomy tube was inserted. The operation in each case lasted about twenty minutes, and anes-

thesia was complete throughout. The number of sutures used in cases 22, 23 and 24 were six.

An analysis of the twenty-four cases mentioned will probably convince the reader that in eucain we have an agent which is safe and reliable. Cases 22, 23, 24 are considered major operations. While cases 1, 4, 6, 7, 10, 14, 15, 16, 17, 21 are not major operations, they are such cases as ordinarily require the use of a systemic anesthetic to permit of operation. The operation on cases 15, 22, 23 and 24 was greatly facilitated by using a drug that induced anesthesia, but which allowed the patient the control of the trachea. With anesthesia by eucain, these patients are conscious and can keep the trachea still during critical stages of the operation. In anesthesia from a systemic anesthetic, mucous accumulates in the lungs and stomach and efforts at expulsion keep the trachea constantly in motion, which movement greatly interferes with the operation. Chloroform and ether irritate the lungs and predispose the patient to acute bronchitis and pneumonia. Tracheotomy itself is a predisposing factor in pneumonia.

Taking these facts into consideration, it is well to select an agent to allow of a painless operation, which will not affect injuriously the respiratory organs while operating in their locality. No pulmonary symptoms followed the use of eucain in any of the above cases. Case 10 had mitral regurgitation. Two drachms of a 5 per cent solution had no effect on the circulation. Case 7 had an irritable heart and she was very nervous. Two drachms of a 5 per cent solution acted as a sedative to her condition. Case 17 had one pint of pus in the left pleural cavity; this naturally deprived the heart of a portion of its space. Two drachms of a 5 per cent solution had no effect on the circulation or repiration. The average duration of anesthesia from eucain is about twenty minutes. The time to wait for complete anesthesia is five minutes. Two drachms of a 5 per cent solution used hypodermatically will in the majority of cases be sufficient to induce anesthesia; but larger amounts can be employed if necessary. The number of sutures used in the operations were ninety-three. After using and seeing sutures employed in so many cases, I do not agree with the assertion made by Fuller (International Journal of Surgery, September, 1896,) that eucain exerts hardening action on the tissues.

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CONTENTS.

MEDICAL SOCIETY PAPERS.

Report of Surgical Cases. By Z. Orto, M. D., Pine Bluff, Ark. 49

Diseases of the Antrum of Highmore. By H. Moulton, M. D., Fort Smith, Ark. ... 55

Symptoms of Cerebral Syphilis. By C. T. Drennen, M. D., Hot Springs, Ark. ... 57

EDITORIAL.

Medical Pessimism 62

A Troubled Doctor 64

Place the Blame Where it Belongs 64

THE ARKANSAS MEDICAL SOCIETY.

Officers of the Society, 1896-97 65

List of Members 66

COUNTY SOCIETIES.

Roster of County Societies 65

MISCELLANY.

A Simple Cure for Insomnia 61

A Limit to Its Capacity 61

The Treatment of Persistent Vomiting of Pregnancy 75

The Management of Abortion. By Andrew F. Currier, M. D., New York 78

1. Some Unusual Cases of Inflammation of the Appendix Vermiformis. 2. Three Cases of Suprapubic Hysterectomy. By Charles Clifford Barrows, M. D. 88

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Medical Society Papers.

Report of Surgical Cases.

BY Z. ORTO, M. D., PINE BLUFF, ARK.

In presenting the following cases for your consideration, I do so with a full knowledge of their imperfections, but hope you may find something practical or statistical in them, that will prove beneficial to the profession, or some member thereof.

Case 1. L. E., female, aged four and one-half months, well developed, healthy child; parents healthy English people, of the laboring class. On July 16, 1895, child had a rise in temperature accompanied by cough, and on 17th she fell from an ordinary cot, the right side of her head coming in contact with the bare floor, still feverish and coughing. The fall caused her to cry for a time, but did not alarm the parents, or produce any serious symptoms.

The slight fever and cough continued from day to day, without any material change until the 20th when the mother was giving the usual bath, she discovered a tumor on the right side of the child's head, and on the 21st, the child seeming more fretful and coughing frequently, mucous rales heard almost over

entire chest; tumor corresponding to right parietal bone, about one and a half by three inches, no soreness or discoloration of the skin. I was not able to determine whether there was a fracture under the tumor or not, but strongly suspected this to be the case.

I prescribed for the bronchitis, and informed the parents of my apprehension, and cautioned them to watch her closely, and that if any unusual symptoms should be noticed to notify me at once. I was again called on the morning of the 22d, the mother becoming alarmed about the peculiar motions of the child's head, which was being rolled from side to side. I now informed the parents of my belief in a fracture of the skull, and asked that Drs. Jordan and Goree, of this city, be called, which was promptly done. Before calling the consultants, I attempted aspiration of the tumor with a hypodermic needle, but the result was negative. After consultation, all agreed that a fracture was extremely probable, and that nothing but surgical means promised anything in the way of relief.

Accordingly, assisted by the consultants, and after the usual antiseptic precautions, I made an incision into the tumor, which proved to be a thick clot of blood under the scalp, resting on the skull, and after turning out the clot, an irregular fracture of the skull was plainly visible, about two inches in length, the clot having formed under the scalp by bleeding from the brain side, through a small pinhole opening in the line of fracture. What seemed to be a clot was plainly visible through the then almost transparent skull, for the breaking up and removal of which I removed a button with the trephine. The dark spot proved to be more of a stain than a clot. I now inserted a strip of gauze through the opening in the skull for drainage, closed the wound with silk, and dressed the same in the usual manner.

Up to the time of and during the operation the child coughed almost constantly, and behaved very badly under the chloroform, but, under the skillful management of Dr. Goree we were enabled to complete the operation without any bad results. The patient rallied quickly, crying lustily before its removal from the table.

July 23 the temperature was 103, restless and bronchitis worse, patient inclining head backward, rolling from side to side, showing, as I thought, symptoms of meningitis. I now ordered an ice cap to its head, and attended to the bronchial inflammation.

July 24, temperature 102, head symptoms improving, continued ice to head, together with other treatment for bronchitis. There being gradual improvement, the treatment was continued, drainage gauze being removed on second day and stitches on sixth day, ice discontinued at this time. All dressing removed, and child discharged well on fourteenth day after operation.

I think this case interesting and worthy of your attention on account of the extreme youth of the patient, the extensive damage to the parietal bone from so short a fall, the length of time until the clot of blood formed under the scalp, the case being complicated by acute bronchitis and the recovery of the child after the meninges had, seemingly, become inflamed. I know of no other child having received such an injury and been successfully trephined at the age of four and a half months. At this writing, nine months after, the child is perfectly well and the button hole has filled in with bony formation.

Case 2. L. P., colored, age 17, female, single.

This case presents to me some unusual symptoms, and is not reported to you to proclaim to the world that another laparotomy has been performed, or that another woman has lost her ovaries, but to record it as an unusual occurrence, and to aid, if possible, in solving some of the perplexities in the practice of our art.

July 12, 1895, I was called to visit this girl, who lived three miles from the city of Pine Bluff. She gave the following history. Two years ago, when 15 years of age, she had connection with a man, but had not since. Her side had pained her since she received a fall eighteen months ago, by being pushed down in fun by a companion. The "pain in the side" was located in the region of left ovary. Three months ago was compelled to quit work, and has been in bed the greater part of this time, pain be-

ing more intense about the menstrual period, which has been regular and normal. She lies in bed with knees flexed upon the abdomen, and complaining of continuous pain in left groin, pulse 120, temperature 102 at my first visit. No history of gonorrhoea, but it was strongly suspected. I prescribed for her a purgative and an anodyne, combined with quinia to eliminate malaria from the case. No improvement having taken place, I was again asked to visit her, July 17, which I did, and was confronted with the same conditions and symptoms.

I now made a digital examination, and was enabled to detect tender and slightly enlarged ovaries. The symptoms of hidden pus were so strong I could not free my mind from the belief in its presence. I continued to treat her without improvement, and, in fact, I might say she grew worse from time to time, and I was driven to recommend an operation, which was at first declined, but later accepted, and on the 24th day of August, assisted by Drs. Smart, Goree and Jordan at her cabin in the country, I removed both ovaries. At this time her condition was extreme—pulse about 140, temperature 101, with jerky respiration—in all respects she presented a bad case for the surgeon. Ether was administered. She rallied fairly well, and made a very prompt and satisfactory recovery, being now in perfect health; has had no more pain or fever. The ovaries were not adherent and were but slightly enlarged, but in a perfect state of fibro cystic degeneration. The tubes were occluded almost their entire length, but their open parts were nearest the ovaries.

This case is instructive and unusual, on account of the symptoms of pus, fever, rigors and continued pain, loss of flesh and appetite, extremely weak and rapid pulse and general distress from so slight pathological conditions. This operation was justifiable because the ovaries were entirely destroyed, so far as fecundation was concerned.

Case 3. Mrs. B., married, aged 35, has had two children, both dead. Has suffered more or less for the last six years with pain in the left groin, more severe at menstrual period, which

has been regular. Confined to bed three or four days each month; for the last three or four years has had some relief by periodical spontaneous flow of straw-colored water through vagina, occurring every two or three months, when three or four ounces of this liquid would be discharged, the flow taking place suddenly, usually at night, and would give almost instant relief.

I saw this patient in August last (1895). Has slightly lacerated perineum and rather deep laceration of cervix on left side, old standing, without redness or inflammation. Both tubes enlarged and a tumor in each groin could be easily mapped out with the finger in the vagina.

Diagnosis, double hydrosalphynx. Advised removal, but this was at first declined, and another physician consulted. Later in the fall, however, the patient called for local treatment, agreeing if she was not relieved by this method she would submit to the necessary operation. Accordingly, after a fruitless attempt to mitigate her condition, she entered the Pine Bluff Infirmary March 18, 1896, and three days afterwards I removed both tubes and ovaries, together with a tumor from each groin, involving the tubes and broad ligaments. They contained the usual fluid of hydrosalphynx. The patient had no unusual symptoms after the operation except a slight temperature elevation from the small stitch abscess until the thirteenth day after the operation. On this morning her temperature and pulse were both normal, ate a hearty breakfast and asked to be allowed to sit up. She suddenly called for the bed pan, and passed about one quart of pure blood, clotted into a perfect mold of the large intestines. Fifteen minutes later her pulse was 120 and very weak; looked pale and seemed blanched, sighing respiration, cold feet and hands, surface moist. She was promptly given a hypodermic injection of astropia, 1-100 grains, strych. sulph. 1-20 grains. Hot bottles of water were packed around her, ergot and opium and lead at once prescribed. She was also given a high injection of one quart of an alum solution, two grains to the ounce of warm water. The alum was promptly returned, stained with blood. The in-

jection was repeated in half an hour, which also came back, but was clear. At this time some small clots of blood came away. The injections were repeated at intervals varying from three to six hours for three days. Forty eight hours after the first hemorrhage there was a slight recurrence, but it did not produce any special depression. Injections of strychnia, 1-60 grains, with morphia and atropia were continued for several days, the patient remaining perfectly quiet, not being permitted to turn upon her sides. She was fed upon liquid diet, and no attempt made to open the bowels, there being no fœces passed for six days, though at different times pieces of mucous membrane were passed, and more or less mucus, with an occasional clot of what seemed to be old blood. Her abdomen had been flat up to the morning of the hemorrhage, but within an hour after this occurrence it was much distended and highly tympanitic, but not tender. Her pulse gradually came down from day to day, being 110 about the end of the first week. Temperature rose after the first hemorrhage, and remained about 100 to 101 1-2 for first six days. On the sixth day she had a natural action of the bowels, without blood or mucus, suffered no pain at any time. She had been a most excellent patient, obeying every instruction, and had not been guilty of any imprudence. One week before she had been given a dose of comp. licorice powder, which had caused some looseness of the bowels. On Saturday night, before the hemorrhage, she had a dose of calomel, which produced nausea and purging within two hours after the administration; small, frequent mucous actions during Sunday, and late in the evening she was given two teaspoonfuls of paregoric, which quieted the bowels until the hemorrhage, Monday morning at 9 o'clock. The cause of this trouble was by no means clear, but it is my belief that it was produced by the dose of calomel, being an impure article. I have often observed unusual results in administering the American calomel, and, of late years, have not prescribed anything but the English make. The points of interest are, I think, obvious, and do not need any further comment by me.

Diseases of the Antrum of Highmore.

BY H. MOULTON, M. D., FORT SMITH, ARK.

[Read before the Section of Surgery of the Arkansas Medical Society at Fort Smith, May 1, 1896.]

On March 10, 1892, a young lady, about 23 years old, consulted me concerning a discharge from her right nostril. She had a nervous and debilitated constitution, and a few years previous had suffered from an inflammatory swelling over the right upper maxilla. Shortly after the subsidence of this swelling she was cured by her dentist, Dr. A. E. Kimmons, of an abscess of the alveolus of the first right upper molar tooth. When the nasal discharge began, she could not state; but it was after the alveolar trouble had been treated, and it had lasted so long that she thought she had chronic nasal catarrh. This discharge was intermittent, the greatest flow occurring on changing from the recumbent to the erect position. It was cream-like in appearance, of a musty, sometimes offensive odor, and without tendency to crust formation. A unilateral discharge with these characteristics suggested at once disease of one of the accessory cavities. The history directed suspicion especially toward the antrum of highmore. So with the nasal mucous membrane cocainized the nasal orifice of the antrum was sought and readily found, just beneath the middle of the lower border of the middle turbinated bone. Pressure with the cotton tipped probe at this point, repeatedly, produced a few drops of pus. A stream of water directed into this opening, after the method of Heryng, but through a curved glass nozzle instead of Heryng's catheter, brought away quantities of pus.

Electric transillumination, much vaunted, but of such doubtful utility that it is not even mentioned by so eminent authority as Bosworth, and puncture with the trochar of Lictwitz, were methods unnecessary in our case. The diagnosis was clear without them.

In treatment the first essential is drainage, then medication of the cavity. Some prominent specialists as, Stork, of Vienna, think the natural orifice is sufficient through which to irrigate and effect a cure. Others make an artificial opening in the outer wall of the meatus naris with Mikulesz's or Kraus' trocar.

Some perforate the outer wall of the antrum in the canine fossa. (Robertson). Many prefer to extract a tooth and thus get into the cavity through the alveolus. But if a tooth is sound, even they hesitate to sacrifice it before first making a trial of the other methods mentioned. The simplest of these is by way of the natural orifice. Garel, of Lyons, claims to cure more than 50 per cent of cases by this plan. In our case there had been an alveolar abscess. While it was reasonable to suppose that this might have been the cause, Bosworth points out how it could be the effect of antral disease due to other causes. At any rate the tooth was now healthy, and we tried for some weeks daily irrigation by means of the glass nozzle, before described, with various antiseptics, chief of which were solutions of peroxide of hydrogen and of boracic acid. Very much improvement followed, but we could not get a permanent cessation of discharge.

Still unwilling to remove a sound tooth, on July 26, aided by Dr. Kimmons, we employed a nasal burr and trephine driven by a dental engine, to perforate the antrum from without. The opening was made through the canine fossa at the labio-ginglival fold, at a point above and between the first molar and second bicuspid teeth. A drainage tube of gold, properly curved, was now constructed, and inserted into the opening and fastened by a clamp to one of the teeth. Injections were made twice daily by the patient herself through this tube, the fluid passing into the antrum and out through the nose. Twice it seemed that a cure had been effected, but each time the removal of the tube was followed by a reappearance of the discharge from the nostril. These methods greatly ameliorated the local condition and greatly improved the general health, but plainly, some further measure was needful to cure. Accordingly, after about a year

from the date of first observation, the patient submitted to the extraction of the first molar tooth, which exhibited necrosis of its lingual root. The drainage tube was now made to enter the antrum through the alveolus of this tooth, and through it daily irrigations resulted in a speedy cure, which has remained permanent now for about two years.

Of great interest in this case was the improvement of general health, following drainage of the septic antrum.

It is evident that at least, if the tooth was not the initial cause, it perpetuated the disease, and the conclusion is inevitable that in a case of antral disease, when we have a history of former disease of a tooth whose root it is known may encroach on the cavity of the antrum, whether the tooth afterwards becomes apparently sound or not, we should at once extract the tooth and go through the alveolus. The explanation of the substance of tooth symptoms is found in the relief of tension by the discharge of an alveolar abscess into the antrum.

Symptoms of Cerebral Syphilis With Report of Cases.

BY C. T. DRENNEN, M. D., HOT SPRINGS, ARK.

Strange and innumerable are the symptoms which present themselves in a syphilis affecting the brain, indeed, we might say that there are no symptoms which are common to the varied forms of cerebral disease that may not be found in a syphilis involving the brain. In fact, it is this very multiplicity and irregularity of symptoms which characterize more than all else, and warrants us in making a diagnosis of cerebral syphilis, especially so when connected with a syphilitic history.

To burden you with an array of symptoms that are to be found in all of the leading text-books upon this subject, would be useless and therefore inopportune. So we will now consider some of the symptoms which have been most commonly

found in our study of this disease. Most people who have syphilis do not appreciate the gravity of the disease.

What symptoms therefore bring them to us? Among the most important are severe headaches, worse at night, frequently accompanied by insomnia. These headaches may be localized or diffuse, usually, however, with increased intensity in one spot, especially in the fronto-parietal region, exacerbation of pain, especially at night, occurring in the early hours of the morning, at other times on awakening; frequently the pain does not disappear during the day, but rarely persists both day and night.

Insomnia often occurs independent of pain in this affection, which is to be remembered, not infrequently painful attacks are followed by temporary ocular paralysis or epileptiform seizures. The mental condition frequently shows a slowness of ideation and loss of the memory of words, inaptitude for intellectual work, sometimes vertigo, melancholia, paroxysms of passion and transitory loss of speech, as well as numbness in one or more limbs, and neuralgic pains. The general health may be affected, manifesting itself in loss of appetite, debility and anemia. These symptoms may be followed by convulsions of epileptiform character, paralysis of the most varied kind, and in many instances, cerebral vomiting.

The following cases will serve to bring out some of the foregoing symptoms in the most easy and natural way:

Charles B., aged 29, single, occupation, that of an actor, gives a history of chancre nine years ago, followed by secondary eruptions, sore throat, etc., for over a period of about four months, during which time he was engaged in his professional work, going from place to place, and in consequence thereof received but little treatment, after which time, however, all manifestations of the disease disappeared until thirteen months ago, when he was standing before a mirror combing his hair, prior to going on the stage, when his right hand and the right side of his face began twitching to such an extent that he let fall the brush and was unable to pick it up for a period of three or four minutes

and to use his language, he was paralyzed, after which time, however, he regained his strength and completed the evening's engagement. He remembers when questioned upon the subject that his head ached dreadfully before and after the attack; within a week or ten days he had a similar attack, this being followed by consecutive attacks, each one becoming more pronounced and alarming, until consciousness was completely lost, and he was precipitated to bed, where he remained for eleven weeks with complete loss of both motion and sensation of the entire right side, in addition to loss of speech. Eleven months after this attack he comes to me and presents these signs and symptoms; his headache, which had been severe up until the present attack, have completely made their disappearance, the patient stating that he cannot have a headache, that he had taken as much as 150 grain doses of iodide of potassium three times daily, without any effects as regards headaches. He also states that he can no longer dream, that he has not dreamt since his first attack; prior to that time he was a great dreamer. Motion and sensation are both normal, but an inability to articulate still remains to quite a marked degree, and it is this symptom which he comes to us with for relief.

I find that he is quite hysterical, since he can be provoked either to tears or laughter by mere suggestion alone. Under vigorous antisyphilitic treatment the patient has gained about twenty pounds in weight in the two months that I have had him under my care; no improvement otherwise has occurred, which tells us that about all the improvement that is to be expected has taken place. The point of special interest in this case is the long lapse of time which occurred between the primary sore and the hemiplegia, marking a period of eight years, most cases occurring within the first year of infection, when no treatment has been given.

Case No. 2. E. W., aged 27, married, occupation, professional gambler, present history of chancre five years ago, treated locally and healed within ten days, no secondary manifestations ever having occurred, that he was aware of, consequently

he received no constitutional treatment whatever. He has remained perfectly well up to within the past four months, when he began having attacks of dyspepsia, gastric disturbances manifested by eructations of gas, loss of appetite and gradual loss in weight, etc. Soon after this he began having twitching of the muscles of the left side of the face, a numbness and tingling of the right arm and hand; all of these symptoms growing more frequent all the while, until I first saw him. I had the opportunity of seeing this patient just after one of his epileptiform seizures, and found his pulse only 50, very much depressed, and his dyspnoea being so great that he begged them to sit him by the side of the open window and use the fan. This attack lasted about forty minutes, when he went about his way, apparently no worse for his former experience. He also had a peculiar squint, always looking at you with the chin lowered and to one side, never up and straight ahead, which his wife assured me was natural with him. Nocturnal headache was his constant companion, localized in the fronto-parietal region. He was put under vigorous antisyphilitic treatment and the improvement is all that could be desired since he has no longer any of his former symptoms, and has regained his entire strength and weight within the past two months. Again we call special attention to the long lapse of time, five years since the primary sore and the present trouble. This marks the interesting feature as in the preceding case.

Case No. 3. Mrs. M., married, mother of two girls, ages 14 and 16 respectively, family history good—no insanity or nervous disease of any kind whatsoever. Present trouble began two years ago, manifesting itself in nocturnal headaches and a peculiar dizziness. I use the word peculiar since these attacks could be invariably provoked at will when in the recumbent posture by allowing the left side of the head to touch the pillow; the dizziness would disappear if she would sit up in bed or turn upon the other side. The other peculiarity of the dizziness lies in the statement that the sensation was that of the whole brain

turning over and over within the bony cavity at a dreadfully and alarming rate, so much so, that she was always much frightened; vomiting usually followed these attacks. This patient gives a distinct history of syphilis twelve years ago with chancre, sore throat, mucous patches, falling of hair, abortions, etc., covering a period of over two years, when she remained apparently well for about eight years. She also has hyperesthesia of the entire body, but more especially of the left hand and right leg. The patella reflexes are normal and no ocular disturbances. Under anti-syphilitic treatment her headaches, which were severe, covering a period of many months, have been relieved, and the dizziness, although much improved, has not disappeared. The point of interest in this case lies in the peculiarity of the dizziness, most virtiginous symptoms manifesting themselves to the patient in quite a different way from that described by this patient; also in point of its close relationship to the so-called nervous prostration.

A Simple Cure for Insomnia.

The Indian Lancet suggests the following as a ready means of inducing sleep: Nature's plan for curing insomnia is to limit the supply of oxygen to the blood, as the cat and dog bury their noses in some soft hollow in their hair or fur, birds put their heads under their wings, and soon fall asleep. Those suffering from insomnia should cover their heads with the bedclothes, and breathe and rebreathe only the respired air. When drowsiness is produced sleep quickly follows, and the bed covering may be pushed aside and as much fresh air obtained as is needed."

A Limit to Its Capacity.

A doctor, in the Medical Brief, says: "The stomach of a new-born infant is very small, its capacity being only one or two fluid ounces, yet it is given bulky teas and numerous other things at frequent intervals all day long and through the night, till death relieves it or the doctor comes and stops such foolishness."

THE

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Address the Editor, F. Vinsonhaler, M. D., Masonic Temple, Little Rock, Ark.

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Editorial.

Medical Pessimism.

In the December number of the New York Post-Graduate, Dr. Wilcox points out the various errors in drug prescribing and the failure of remedies to relieve. It is a matter of sincere regret that in addition to the disappointment attending therapeutics he found one-half of the medicines used by pharmacists in compounding, to be below the standard and some of them inert. The deductions the

doctor draws from his investigations are not cheerful to say the least. Fortunately, medical pessimism is almost exclusively a disease confined to individuals who by nature are given to discounting the things of life and frequently disappear after a vigorous dose of calomel and soda. The average general practitioner knows that there are times when everything seems to go wrong and the black saddle bags seem to have lost their potency; when even quinine sulphate, ipecac and calomel seem powerless. But he is never as a rule led into general doubt and disbelief, but preserves a healthy faith in his art and a shrewd cunning, which years of experience have taught him, in placing the simple remedies at his disposal.

The life of a country practitioner is peculiarly conducive to level-headed thinking and conservatism. It is true the country doctor does not have the same opportunities to learn his mistakes by means of an autopsy as does his more favored confreré of the city; it might be added that he does not depend quite so much on the autopsy. At any rate he is always sanguine as to his methods of treatment, however futile that hope may be. We cannot help feeling like Fothergill, who said of a distinguished American practitioner, that he would go to him to learn his ailment but never have him prescribe, that his ideas of the history of disease were so fixed as to lead him into therapeutic nihilism.

The writer has often felt that medical skepticism was to be found most frequently in routine prescribers, and in those to whom opportunity for clinical study has been denied. The application of drugs is not so fascinating as the pathological and bacteriological researches which have engrossed the minds of our investigators for the last twenty years. Had we more workers in therapeutics in the lines marked out by Ringer the exactness of drug prescribing might become more general and medical pessimism less.

A Troubled Doctor.

A correspondent from the Indian Territory writes to the editor for a copy of the State laws governing the practice of medicine in Arkansas. He states that several old ladies are practicing medicine in his locality in defiance of written and unwritten law. Also these irregular and aggressive "Gamps" collect fees for their services which are thus lost to organized medicine and diverted into the pockets of the enemies of science. We regret that we have little else than sympathy to offer our confrere. We cannot see how the laws of Arkansas can restrict and control refractory females in other States and Territories. The truth is, that Arkansas cannot take care of her own irregulars. We can refer our colleague, however, to the works of Mr. Billings, where he will find much that is instructive and comforting. It contains the sermon that "The best way to manage a woman is to let her do it herself." Let us hope that our correspondent will see in this the solution of his troubles.

Place the Blame Where it Belongs.

The pages of a daily paper in this city recently contained an article reflecting upon the Gould system for inhuman treatment of a former employee. We do not see, even from the lurid description of the occurrence given by the reporter of the morning paper, how the railway company are to be to blame for lack of medical attention in this case. The blame rests with the imperfect and faulty system of laws which will not permit the city authorities to raise the needed funds to equip and maintain a hospital already built and presented to the city by Logan H. Roots estate. Had the board of control the necessary funds, the emergency wards would be open for just such unfortunates, and the public would have been spared the revolting details of neglect which occurred to this unhappy sufferer. Let us hope that funds will be forthcoming speedily which will make such occurrences impossible.

The Arkansas Medical Society.

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The *Place* of Meeting—Little Rock, Ark.

The *Time* of meeting—Second Tuesday in May, 1897.

County Societies.

Roster of County Societies.

COUNTY.	MEM'S	PRESIDENT.	SECRETARY.	MEETING PLACE.	STATED MEETINGS.
Ashley	5	I. J. Newton, Hamburg	J. W. Simpson, Berea	Hamburg	
Benton	22	W. G. Floyd, Bentonville	C. E. Hurley, Bentonville	Bentonville	Bimensal.
Boone	16	J. T. Tipton, Lead Hill	L. Kirby, Harrison	Selected by vote of society	Quarterly.
Carroll and Eureka Springs		R. P. Moore, Oak Grove	L. W. Weaver, Eureka Springs	Eureka Springs	Quarterly.
Garland Hot Spgs Med So	16	H. P. Collings, Hot Springs	E. C. Hayes, Hot Springs	Hot Springs	Monthly.
Independence	23	T. J. Woods, Batesville	J. W. Case, Batesville		Quarterly.
Jackson	15	J. M. Green, Newport	J. M. Jones, Newport	Newport	Monthly.
Jefferson	30	J. W. Withers, Pine Bluff	J. P. Runyan, Pine Bluff	Pine Bluff	Monthly.
Lawrence	14	N. R. Townsend, Black Rock	Albert Thornburgh, Sedgewick	Selected	Monthly.
Mississippi	5	W. R. Harrison, Burdetown	C. A Turner, Osceola		
Phillips		D A. Linthicum, Helena	M. Fink, Helena		Monthly.
Pope	10	L. T. Ragsdale, Pott's Station	J. A. Westerfield, Atkins		
Prairie	8	F. A Hipolite, DeVall's Bluff	J. R. Lynn, Des Arc	Des Arc	Annually.
Pulaski L. R. Med. So.	45	A. H. Scott, Little Rock	F. Vinsonhaler, Little Rock	Little Rock	First and third Monday of each month.
Saline		D. N Fisher, Benton	J. M. Phillips, Bryant	Benton	
Sebastian	26	E. G. Epler, Fort Smith	J. D. Southard, Fort Smith	Fort Smith	Every second Tuesday.
Washington		John Young, Springdale	T. W. Blackburn, Fayetteville		

List of Members of the Arkansas Medical Society

February, 1897.

[Members will confer a favor upon the Secretary by reading carefully the list of members and informing him of any inaccuracies that may be noticed, either in their own names or those of others that are known to them.]

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Baxter County—

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John Bolinger, Lead Hill, Missouri Medical College; L. Kirby, Harrison, St. Louis Medical College; J. T. Tipton, Lead Hill, Memphis Hospital Medical College; L. C. Tyson, Harrison, Missouri Medical College; A. J. Vance, Harrison, Vanderbilt University.

Carroll County—

J. B. Bolton, Eureka Springs, College of Physicians and Surgeons, Keokuk; W. C. Cardwell, Carrollton, University of Nashville; A. J. Gibbs, Eureka Springs, Medical Department University of Pennsylvania; J. D. Jordan, Eureka Springs, University of Louisville; R. P. Moore, Oak Grove, Vanderbilt University; J. M. Poynor, Berryville, Medical Department A. I. U.; L. W. Weaver, Eureka Springs, Tulane University.

Clark County—

J. R. Dale, Arkadelphia, Jefferson Medical College; J. A. McCallum, Arkadelphia, Bellevue Hospital Medical College; A. B. Moore, Gurdon, Vanderbilt University; W. M. Moore, Hollywood, University of Tennessee; J. C. Wallis, Arkadelphia, Jefferson Medical College.

Clay County—

W. B. Shields, St. Francis, Memphis Hospital Medical College.

Cleburne County—

Adam Guthrie, Jr., Quitman, Medical Department A. I. U.; W. J. Hornbarger, Heber, Medical Department A. I. U.

Cleveland County—

T. H. Ackerman, Toledo, Vanderbilt University; W. W. Breathwit, Kingsland, Louisville Hospital Medical College; C. A. Stanfield, Toledo, Memphis Medical College; J. O. Vance, New Edinburgh, Kentucky School of Medicine; W. S. Woolford, Kingsland, Medical Department A. I. U.

Columbia County—

J. T. Hawkins, Mount Holly, University of Louisville; W. N. Warren, Buckner, Louisville Medical College.

Conway County—

A. R. Bradley, Plummerville, Memphis Hospital Medical College; S. A. Mason, Hattieville, Memphis Hospital Medical College.

Craighead County—

Thos. H. Jones, Jonesboro, University of Nashville; J. H. Kitchens, Jonesboro, University of Maryland; C. M. Lutterloh, Jonesboro, Vanderbilt University.

Crawford County—

R. H. Alvis, Alma, University of Nashville; O. M. Bourland, Van Buren, University of Nashville; J. A. Dibrell, Sr., Van Buren, University of Pennsylvania; M. S. Dibrell, Van Buren, Medical Department A. I. U.

Crittenden County—

R. W. Barton, Marion, Ark., College P. & S., Baltimore.

Cross County—

J. L. Hare, Wynne, Kentucky School of Medicine.

Dallas County—

Z. J. Lantorn, Dalark, Medical Department A. I. U.

Drew County—

D. C. Carroll, Tillar, Medical Department A. I. U.; M. M. Evans, Florence, Southern Medical College; B. A. Hall, Monticello, Kentucky School of Medicine; F. M. Loper, Monticello, Kentucky School of Medicine; M. Y. Pope, Monticello, Jefferson Medical College; W. T. Stanley, Tillar, Louisville Medical College.

Faulkner County—

G. S. Brown, Conway, Bellevue Hospital Medical College.

Franklin County—

W. A. Amis, Ozark, Bellevue Hospital Medical College; H. H. Turner, Ozark, Jefferson Medical College; E. R. Weaver, Vesta, Missouri Medical College; Thos. Douglass, Ozark, University of Louisville; W. E. Jones, Aetna, Medical Department A. I. U.; R. M. Southard, Charleston, University of Louisville.

Fulton County—

C. W. Culp, Mammoth Spring, Memphis Hospital Medical College.

Garland County—

P. L. Barry, Hot Springs, Baltimore Medical College; W. H. Barry, Hot Springs, Memphis Medical College; L. H. Barry, Hot Springs, Baltimore Medical College; Randolph Brunson, Hot Springs, Tulane University; H. P. Collings, Hot Springs, Bellevue Hospital Medical College; S. P. Collings, Hot Springs, Bellevue Hospital Medical College; C. T. Drennen, Hot Springs, Rush Medical College; J. H. Gaines, Hot Springs, University of Louisville; Eugene Hay, Hot Springs, University of Virginia; T. E. Holland, Hot Springs, Missouri Medical College; J. T. Jelks, Hot Springs, University of Nashville; A. F. Koontz, Hot Springs, Tulane University; J. H. Leslie, Hot Springs, University of Louisville; J. B. Payne, Hot Springs, New Orleans School of Medicine; R. W. Steger, Hot Springs, College of Physicians and Surgeons, New York; M. G. Thompson, Hot Springs, University of Louisville.

Hempstead County—

J. R. Autrey, Columbus, Louisville Medical College; W. A. Briant, Fulton, Missouri Medical College; S. L. B'Shers,

Fulton, University of Louisville; S. M. Carrigan, Washington, Missouri Medical College; L. J. Gillespie, Hope, Missouri Medical College; A. McGasgill, Wallaceburg, Mobile Medical College; T. A. McLarty, Hope, Atlanta Medical College; R. M. Wilson, Hope, Missouri Medical College.

Hot Spring County—

J. F. Graham, Malvern, Medical Department A. I. U.

Howard County—

J. S. Corn, Nashville, Vanderbilt University; R. S. Morgan, Center Point, Memphis Hospital Medical College; J. T. Whitmore, Center Point, Vanderbilt University.

Independence County—

C. E. Cantrell, Salado, Medical Department A. I. U.; J. W. Case, Batesville, Jefferson Medical College; J. B. Crane, Batesville, University of Louisville; H. M. Dickson, Jamestown, University of Louisville; R. C. Dorr, Sulphur Rock, Missouri Medical College; D. C. Ewing, Batesville, University of Louisville; C. C. Gray, Hickory Valley, Vanderbilt University; A. N. Hathcock, Sulphur Rock, Missouri Medical College; R. H. Hodges, Moorefield, University of Louisville; T. B. Hodges, Sulphur Rock, University of Louisville; W. T. James, Victor, Vanderbilt University; J. H. Kennerly, Sulphur Rock, University of Louisville; W. B. Lawrence, Batesville, Jefferson Medical College; H. G. Logan, Edwards, Atlanta Medical College; S. L. Vaughan, Sulphur Rock, University of Louisville; M. C. Weaver, Jamestown, Louisville Medical College; T. J. Woods, Batesville, Kentucky School of Medicine; Ed Wycough, Salado, Medical Department A. I. U.

Izard County—

E. A. Baxter, Melbourne, University of Louisville; D. E. Evans, Barren Fork, Medical Department A. I. U.

Jackson County—

A. J. Brewer, Newport, University of Louisville; J. M. Green, Tuckerman, College P. and S., Keokuk; J. W. Coffman, Newport, Jefferson Medical College; J. S. Graham, Tuckerman, Bellevue Hospital Medical College; W. H. Heard, Newport, University of Louisville; J. M. Jones, Newport, University of Nashville; Henry Owen, Newport, University of Nashville; T. L. Slayden, Newport, Vanderbilt University.

Jefferson County—

W. S. Cox, Pine Bluff, Missouri Medical College; J. L. Goree, Pine Bluff, Louisville Medical College; O. C. Hankinson, New Gascony, Vanderbilt University; C. U. Harrison, Pine Bluff, Kentucky School of Medicine; A. C. Jordan, Pine Bluff, Vanderbilt University; D. S. Mills, Pine Bluff, Memphis Medical College, 1851; Z. Orto, Pine Bluff, Miami Medical College; P. H. Pendleton, Pine Bluff, University of Louisville; A. B. Loving, Pine Bluff; J. P. Runyan, Pine Bluff, Tulane University; J. W. Scales, Pine Bluff, Vanderbilt University; J. W. Seymour, Pine Bluff, Missouri Medical College; J. H. Smart, Pine Bluff, College P. and S., New York; J. P. Stanley, Pine Bluff, University of Pennsylvania; S. M. Taylor, Pine Bluff, Jefferson Medical College; A. G. Thompson, Linwood, College P. and S., Keokuk; R. C. Thompson, Pine Bluff, Bellevue Hospital Medical College; A. W. Troup, Pine Bluff, Rush Medical College; D. C. Walt, Wabbaseka, Memphis Hospital Medical College; W. J. Withers, Altheimer, Medical Department University New York.

Johnson County—

G. D. Houddleston, Lamar, Vanderbilt University; W. R. Hunt, Coal Hill, Medical Department A. I. U.; A. M. McKennon, Clarksville, University of Louisiana; J. P. Mitchell, Clarksville, Jefferson Medical College; T. D. Nichols, Clarksville, University of Louisville; C. E. Robinson, Clarksville, Jefferson Medical College; R. B. West, Hartman, Vanderbilt University.

Lafayette County—

D. W. Bright, Lewisville, Kentucky School of Medicine; F. W. Youmans, New Lewisville, Rush Medical College.

Lawrence County—

N. R. Townsend, Black Rock, Hospital Medical College, Louisville; W. J. Hatcher, Imboden, University of Nashville; C. P. Merriwether Walnut Ridge, Missouri Medical College; N. Rector, Smithville, Nashville College of Medicine and Surgery.

Lee County—

D. S. Drake, Marianna, Bellevue Hospital Medical College; G. D. Gray, Haynes, Washington University; W. L. Harper, Park Place, Southern Medical College, Atlanta;

J. W. Haynes, Marianna, Washington University; T. J. Robinson, Marianna, University of Louisville.

Lincoln County—

Wm. Bittenger, Grady, Iowa State University; E. T. Pry, Douglas, Vanderbilt University; J. G. Worley, Varner, Tulane University.

Logan County—

W. H. Bennett; T. D. Merritt, Magazine, University of Louisiana; A. A. Moomaw, Booneville, Kentucky School of Medicine; E. T. Powell, Magazine, University of Louisville; J. S. Shibley, Paris, University of Nashville; J. N. Sipe, Booneville, Vanderbilt University; J. J. Smith, Chismville, Memphis Medical College.

Lonoke County—

N. B. Beakley, England, Medical Department A. I. U.; F. A. Corn, Lonoke, Vanderbilt University; J. P. Fletcher, Lonoke, Charity Hospital Medical College, 1876; G. W. Granberry, Cabot, Memphis Hospital Medical College; R. N. Ross, Lonoke, University of Nashville.

Miller County—

W. C. Spearman, Texarkana, University of Louisville.

Mississippi County—

F. G. McGavock, McGavock, University of Nashville; R. C. Prewitt, Osceola, Kentucky School of Medicine.

Monroe County—

W. T. Bailey, Clarendon, Louisville Medical College; F. T. Murphy, Brinkley, Vanderbilt University.

Nevada County—

E. R. Armistead, Prescott, University of Louisville.

Ouachita County—

J. T. Henry, Millville, University of Nashville; G. W. Hudson, Camden, University of Maryland; A. B. Loving, Camden, University of Louisville.

Phillips County—

F. Noel Burke, Helena, Ohio Medical College; M. Fink, Helena, Missouri Medical College; A. A. Horner, Helena,

University of Pennsylvania; A. J. Hughes, Barton, Louisville, Ky.; D. A. Linthicum, Helena, St. Louis University; T. C. Linthicum, Helena, Kentucky School of Medicine; W. C. Russwurm, Latour, Louisville Medical College; C. R. Shinault, Helena, Tulane University; J. H. Vineyard, Vineyard, Jefferson Medical College.

Polk County—

L. B. Sutherland, Cove, St. Louis College of Physicians and Surgeons.

Pope County—

J. M. Campbell, Scottsville, Memphis Medical College; R. M. Drummond, Russellville, Vanderbilt University; W. H. Hill, Russellville, University of Louisville; C. L. Kirksey, Dover, Atlanta Medical College; D. P. Ruff, Dover, Nashville Medical College; J. A. Westerfield, Atkins, University of Louisiana.

Prairie County—

B. W. Flinn, Des Arc, Memphis Hospital Medical College; W. W. Hipolite, Devalls Bluff, University of Michigan; J. R. Lynn, Des Arc, Memphis Hospital Medical College; W. P. Owen, Devall's Bluff, College of Physicians and Surgeons; W. F. Williams, Hazen, Memphis Hospital College.

Pulaski County—

W. B. Barner, Little Rock, Vanderbilt University; E. Bentley, U. S. A., Little Rock, College of Physicians and Surgeons, New York; A. L. Breysacher, Little Rock, Missouri Medical College; G. M. D. Cantrell, Little Rock, University of Nashville; R. B. Christian, Little Rock, University of Virginia; E. R. Dibrell, Little Rock, University of Pennsylvania; J. A. Dibrell, Jr., Little Rock, University of Pennsylvania; P. Dickinson, Little Rock, Missouri Medical College; H. C. Dunavant, Little Rock, University of Nashville; R. M. Enders, Little Rock, University of Louisiana; F. L. French, Little Rock, Medical Department A. I. U.; L. P. Gibson, Little Rock, Jefferson Medical College; C. S. Gray, Little Rock, St. Louis Medical College; D. A. Gray, Little Rock, University Pennsylvania; D. R. Hardeman, Little Rock, Kentucky School of Medicine; P. O. Hooper, Little Rock, Jefferson Medical College; A. R. Howell, Argenta, Jefferson Medical College; G. W. Hudspeth, Little Rock, Memphis Hospital College; W. P. Illing,

Little Rock, Medical Department A. I. U.; R. G. Jennings, Little Rock, Maine Medical College; S. H. Kempner, Little Rock, Bellevue Hospital Medical College; S. King, Little Rock, University of Louisville; J. H. Lenow, Little Rock, Jefferson Medical College; R. W. Lindsey, Little Rock, University of Nashville; J. J. McAlmont, Little Rock, Cleveland, O.; E. Meek, Argenta, Kansas City College of Physicians and Surgeons; W. H. Miller, Little Rock, Bellevue Hospital Medical College; C. E. Nash, Little Rock, University of Missouri; J. W. Pipkin, Little Rock, Medical Department A. I. U.; D. J. Prather, Little Rock, Louisville Medical College; J. J. Robertson, Little Rock, Atlanta Medical College; A. H. Scott, Little Rock, Jefferson Medical College; J. H. Southall, Little Rock, University of Louisiana; L. R. Stark, Little Rock, New Orleans School of Medicine; Wm. Thompson, Little Rock, University of Louisville; F. Vinsonhaler, Little Rock, Medical Department Columbia College, New York; C. Watkins, Little Rock, Jefferson Medical College; N. Weny, Little Rock, St. Louis College of Physicians and Surgeons.

Randolph County—

T. O. Esselman, Pocahontas, University of Nashville.

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S. J. Graham, Traskwood, Medical Department A. I. U.

St. Francis County—

W. R. Cason, Forrest City, Jefferson Medical College.

Scott County—

A. A. Sanford, Waldron, Vanderbilt University.

Sebastian County—

J. C. Amis, Fort Smith, University of Louisville; W. W. Bailey, Fort Smith, University of Michigan; A. L. Brewster, Huntington, Vanderbilt University; J. G. Eberle, Fort Smith, Kentucky School of Medicine; E. G. Epler, Fort Smith, Chicago Medical College; B. Hatchett, Fort Smith, Vanderbilt University; D. M. Gardner, Fort Smith, Missouri Medical College; Geo. F. Hynes, Fort Smith, Cleveland Medical College; D. T. Johnson, Fort Smith, Bellevue Hospital Medical College; F. W. Johnson, Fort Smith, Missouri Medical College; J. W. McConnell, Huntington, Medical Department A. I. U.; John McGinty,

Hackett, Kentucky School of Medicine; H. Moulton, Fort Smith, Chicago Medical College; L. L. Sanders, Fort Smith, Medical Department University of Georgia; J. D. Southard, Fort Smith, University of Louisville; T. J. Wright, Fort Smith, St. Louis Medical College; St. Cloud Cooper, Fort Smith, Missouri Medical College; W. R. Brooksher, Fort Smith, Kentucky School of Medicine; J. R. Gant, Fort Smith, St. Louis Medical College; G. Lucas, Van Buren, Missouri Medical College; S. A. Ryan, Spring Hill, Medical Department A. I. U.; R. L. Rainey, Spring Hill, University of Maryland; J. H. Foster, Spring Hill, Memphis Hospital Medical College.

Sharp County—

John Johnson, Sidney, Kentucky School of Medicine.

Stone County—

R. S. Blair, Mountain View, Vanderbilt University.

Van Buren County—

W. R. Greeson, Clinton, Vanderbilt University.

Washington County—

T. W. Blackburn, Fayetteville, Medical Department A. I. U.; J. H. Brewster, Prairie Grove, Medical Department A. I. U.; W. H. Mock, Prairie Grove, Vanderbilt University; W. B. Welch, Fayetteville, University of Nashville; H. Wells, Boonesboro, St. Louis Medical College; W. N. Yates; D. Christian, Elm Springs, St. Louis Medical College; A. G. Henderson, Fayetteville, Missouri Medical College; E. G. McCormick, Prairie Grove, Missouri Medical College; J. W. Webster, Cincinnati, Missouri Medical College.

White County—

J. C. Cleveland, Bald Knob, Missouri Medical College; J. M. Jelks, Searcy, University of Nashville; K. A. McIntosh, Beebe, University of Louisville; L. E. Moore, Searcy, Vanderbilt University.

Woodruff County—

L. A. Jelks, McCrory, Vanderbilt University; B. A. Fletcher, Augusta, Bellevue Hospital Medical College.

Miscellany.

The Treatment of Persistent Vomiting of Pregnancy.

According to Dr. M. A. Schab (La Presse Medicale, December 6, 1896), the enormous number of therapeutic means reputed to be valuable in the treatment of vomiting of pregnancy suggest their general impotency, as the more difficult a complaint is to treat the more numerous will be the remedies proposed.

The prevailing opinion seems to be that incorrigible nausea of pregnancy is a reflex neurosis of the stomach. The reflex originates in the uterus and terminates in its action on the stomach, which must always be supposed to be in a favorable neuropathic condition. A favorable nervous organism must exist for the evolution of the symptoms. A large number of individuals who vomit persistently during pregnancy have hysterical tendencies. The symptoms begin and cease suddenly without apparent cause.

The treatments proposed have been hygienic, medical, dietetic and local.

Hygienic and Dietetic Treatment.—The treatment often produces excellent results. In view of the fact most of the patients are neuropathic and hysterical, hygienic treatment becomes most important and rational. Frequently the most simple practice will arrest the vomiting. A change of habitation with a sojourn in the country is always to be recommended.

Very unimportant changes sometimes cause the persistent vomiting to cease. The departure of some person from the family circle, the experience of a strong moral emotion, or an intercurrence of a sickness will cut short the vomiting. Also a mental influence exerted by a stranger or by the physician will be very beneficial.

Alimentation is not less in importance than hygienic and moral influences. One point must always be insisted upon, namely, that the diet be composed of a great variety of foods.

With this variety those which are best borne by the stomach can be discovered.

Beginning with the foods most easily digested the capricious appetite can be led to tolerate meats, etc. It is well to begin with a simple diet. Milk and liquid foods can most always be borne. Sometimes the milk will be agreeable if it is flavored with peppermint, etc. Often the best results are obtained with alcoholic drinks. The effect of the alcohol on the circulation, its stimulation of the gastric secretion and its promotion of the muscular movements make it a valuable agent. Some form of wine, in small doses, after meals, is therefore good. Cazeaux recommends large doses.

Medical Treatment.—There is almost no end to the list of drugs proposed for persistent vomiting of pregnancy.

It is well to attempt to combat the vomiting of pregnancy by the means employed in cases of nausea from ordinary causes.

All drinks which liberate carbon dioxide are worthy of mention. The gas acts with great efficiency. It is on account of this gas that champagne is so well tolerated.

The alkalies (sodium and potassium salts) cause an increased action of the gastric glands and they, therefore, have a good effect on nutrition. Sodium bicarbonate in fifteen-grain doses is the best salt. The alkaline waters are also good.

Lusk advocates the use of nux vomica, which stimulates the muscles of the stomach. Five to ten drops after meals is the proper dose. Tincture of iodine has been extensively used by Lasegue. Pepsin has its advocates.

Germain See has proposed the use of cannabis indica in moderate doses. Very often sulphuric ether, taken on sugar or in pearls, moderates the persistent vomiting.

Tarnier considers lavage of the stomach to be the most rational means of treatment.

It is a general observation that constipation is a troublesome complication in cases of persistent gravid vomiting. Laxatives and purgatives are therefore called for.

There is a list of drugs which have a special action on the muscles and mucous membrane of the stomach. The action on the mucous surface is anesthetic. These agents often act very efficiently against the vomiting. These drugs are chloroform, cocaine, opiates and menthol. The chloroform can be administered in an aqueous solution flavored with mint or orange water.

Cocaine has been extensively used with success.

Opiates have been strongly recommended by German authors. Enemas of tr. opii or hypodermic injections of morphine, give better results than does an oral administration of the drug.

There is another line of treatment based on the assumption that the pathology of the vomiting is to be found in a hysterical state. From these premises it is natural that a treatment should be proposed which acts as a calmant to the general nervous system. Bromides and chloral introduced by the mouth or rectum often yield excellent results. According to Cohnstein, the bromides should not be continued if the vomiting does not cease after a few doses. The best results are obtained in the early months of pregnancy. When the vomiting habit is in its inception chloral must be given in large doses. It acts on the vomiting by causing muscular depression.

The use of cerium salts has been highly extolled by Simpson. The salts used are the oxalate, carbonate or valerianate. It is not known how these salts act, but they are positively beneficial in many instances.

Many have recourse to drugs which stimulate the general nervous system. Caffeine, injections of ether and artificial serum have been used with seeming success. The serum has demonstrated its worth in cases where vomiting is associated with malnutrition.

Very often adjuvant external treatment has been practiced. This consists, namely, in revulsive applications on the epigastric region and along the spine.

Treatment with electricity has many advocates. Faradization has been used with varying results. Some observers are inclined to credit the continuous current with all the good results. As early as 1868 Semmola practiced systematic electrical treatment in all cases of nervous vomiting and he has reported cases of vomiting of pregnancy which yielded to the application of the current to the epigastric region.

For a long time it has been held that the reflex cause of the vomiting lies in the uterus. Consequently local treatment has been important.

It was thought that a hyperesthesia of the neck from a congestion was the cause and the neck has been sacrificed with hopes of betterment.

Cervical ulcerations have borne the blame for the trouble and they have been cauterized with silver nitrate, etc.

Some authors have favorably modified the vomiting by correcting malpositions of the uterus.

Rigidity of the neck has been corrected by applications of belladonna and cocaine with the hope of ameliorating the vomiting.

Digital dilatation has been practiced by Copeman.

The Management of Abortion.

BY ANDREW F. CURRIER, M. D., NEW YORK.

[International Journal of Surgery.]

The definition of abortion as the condition in which death of the foetus occurs prior to the time when the foetus is viable, though an arbitrary one, is sufficiently exact for clinical purposes, with the understanding that viability is not usually established until the seventh month of gestation has begun.

We, therefore, classify as premature labors all those which occur between viability and term.

We exclude from consideration the condition of ectopic gestation, which has a line of treatment peculiar to itself.

It will first be desirable to consider the causes which lead up to abortion.

They may be intrinsic, within the body, or extrinsic, without the body.

Of the former we may have those which act mainly through the circulation, through the nervous system, or by mechanical irritation. Of the latter most of them are traumatic and act directly upon the uterus, but some operate indirectly through the vascular or nervous system. Of the intrinsic causes which act through the circulation the most numerous are the venereal diseases, whether by impairing the vitality of the structures in general of the growing foetus, or by producing destructive changes in the placenta. Nothing is more deleterious to foetal life than such diseases, especially syphilis, and nothing except malignant disease clings with such persistence to the generative organs of woman, precluding in vast numbers of cases all hope of living, healthy offspring.

Poverty of the blood, as in general anaemia, phthisis, chronic renal disease, etc., also effectively prevent proper foetal nutrition and induce abortion.

The toxic effects on a vitiated blood supply are also seen in the various zymotic diseases which may attack a pregnant woman and destroy the life of her foetus.

Of the causes which act through the nervous system, those which proceed through the emotions, fear, anxiety and grief are prolific in abortions. The dread of impending or anticipated evil, anxiety over one's personal condition, the worry which characterizes many women during the pregnant state and which arises purely from causes within the individual, grief and disappointment over real or fancied ills, any of these may result in the premature death of the foetus. We must remember in this connection that the nerves of a pregnant woman are constantly in a state of unstable equilibrium, and if in a given case a woman is of a neurotic or hysterical tendency, the chances are that this tendency will be exaggerated and magnified should she become pregnant.

The intrinsic causes which act by mechanical irritation to produce abortion are many. Among them may be mentioned diseased condition of any portion of the uterine structure, whether benign or malignant, also disease of the structures adjacent to and connected with the uterus. An intra-uterine polypus, especially if located within the corpus uteri, will almost unfailingly cause abortion at an early period, so also will multiple myomata of the uterus, and less frequently chronic endometritis or chronic salpengitis. Cancer of the uterus develops very rapidly during pregnancy, and will often cause abortion; it will sometimes, however, permit the patient to carry the foetus until viability is well established. Outside the uterus the pressure from large tumors may be sufficiently irritating to cause uterine contractions and expulsion of the foetus, but it is remarkable how tolerant the uterus often is to insults of this character. If the pregnant uterus is retroflexed or if adhesions unite the organ to surrounding structures abortion will usually result. Of the extrinsic causes those which are traumatic are numerous, and it is often remarkable that certain women escape at all, so exposed are they to traumatism during pregnancy.

Frequent and violent coitus is probably one of the most common causes of this character. It is, of course, difficult in many cases to determine that this is the cause. We all recognize the difficulty of getting at such facts, and of removing the cause even when it has been ascertained.

Extraordinary forms of traumatism causing abortion are injuries to the vagina and uterus by falls, the penetration of foreign bodies, etc. It may not be generally known that not a few abortions have been caused by penetration of the uterus through the abdomen by the horns of cattle.

Abortions of a criminal character, whether self-induced or caused by the professional abortionist, are usually due to traumatism, and to this cause is probably attributable a much greater percentage of the diseases of the uterus and other pelvic organs than is commonly supposed. It is also probable that

the number of women who die from sepsis, as a result of such operations, which are often performed with the grossest carelessness and ignorance, in addition to their criminality and general detestability, is very large.

Traumatisms in which the element of shock is considerable, such as burns, severe surgical operations, or the accidents of travel may be expected to result in abortion.

Other extrinsic causes may act through the nervous system, for example, fear in a thunder storm, or perhaps the actual effect of electrical shock, depression from various causes, shock from an unusual or horror-exciting experience. The latter frequently give rise by means of the intense impression which is produced upon the mother to deformities and abnormalities in the foetus, when the force is not sufficient to destroy life altogether.

Finally, extrinsic causes may act through the blood current and produce abortion, as in the effect of various poisonous drugs, some of which are known to be abortifacient, and are taken for that purpose, others absorbed in a volatile form in the course of one's daily occupation, as occurs among workers in tobacco, lead, mercury, phosphorus, copper and arsenic, while others are taken by accident or for the purpose of relieving some bodily ailment.

The magnitude of the subject under consideration is too often underestimated or ignored by the general practitioner. In a practice extending through sixteen years in which many thousand women with one form or another of disease of the generative organs have come under the observation of the writer, it has been quite unusual to meet with a married woman who has been impregnated who has not also at some time in her life experienced abortion. An event of this character, which is an abrupt and violent check to a natural process, is not and cannot be without deleterious influence. It is true that the consequences with some women are much more severe and serious than with others. With thousands

of women, however, it is the starting point of pelvic disease of a greater or less degree of gravity.

It therefore becomes important in every case in which the services of a physician are sought to manage it with the most scrupulous care and fidelity, and with especial regard to possible ulterior bad consequences.

The scheme of treatment takes into consideration the possible prevention of the abortion, the procedure in case the abortion is inevitable, also the questions whether the death of the foetus is recent, or whether death has occurred weeks or months prior to the time of treatment, with the symptoms peculiar to each condition.

Impending abortion may be announced with or without hemorrhage, with or without uterine contractions, and with or without uterine discharge. A vaginal discharge may be incidental in any case, but without essential bearing upon the accident itself. There may be for weeks an utter absence of symptoms indicative that foetal death has occurred.

If the accident is foreshadowed by symptoms pointing to uterine disturbance, the first indication for the patient is complete rest in bed. The law seems to be universal for every tissue and organ of the body that when any morbid process is present the first requisite in effecting its cure is physiological rest. If the disturbance is due to the action of syphilitic poison or the germs of some other infectious disease the treatment must be directed as vigorously as possible against those germs with the chances, in such cases, that abortion will not be prevented. As large doses of mercury as possible, in a form suitable to the individual, must be given from this time forward continuously until one or more subsequent pregnancies have been passed Failure to insist rigorously upon continuous treatment may be the cause of successive abortions in women who have acquired syphilis. For the drug treatment of other infectious diseases, when abortion is impending, antiseptics are the logical measures in as large

doses, and in such form, as can be well tolerated. We need not linger over the details, for they can be regulated in accordance with individual requirements.

It seems hardly necessary to say that if the disturbing causes are of a mental or moral character, and cannot be removed, abortion will probably follow, as a natural consequence. If uterine discharge of a purulent or semi-purulent character be present, it may indicate either disease in the endometrium or in some portion of the ovum. In rare cases it may indicate suppurative disease of the tubes. This likewise will be an almost certain cause of abortion, for there is as yet no known method of successfully applying medication to the diseased membranes of the ovum, and the endometrium cannot be treated until the ovum is out of the way. It must therefore be evident that with certain inflammatory conditions of the ovum and endometrium abortion is almost inevitable.

The symptom which most infrequently excites attention in impending abortion is hemorrhage from the uterus. It may be a mere show or stain or it may be profuse, the former if endometritis or violent coitus is the exciting cause, the latter, if the placenta is abnormally located or if the uterus is the seat of malignant disease. In every case it demands the attention of the physician, and measures must be taken to check it and prevent its recurrence. Such measures may consist in internal medication or in the application of pressure, the true surgical hemostasis, to the bleeding surface, either directly or indirectly.

Of internal medication we are learning to place less and less dependence upon it, because of its uncertainty, the indirectness of its application, and the disproportion, in many cases, between the discomfort which it causes and the benefit which is derived from it. There are instances, however, in which one is compelled to resort to it whether from want of familiarity with the local and direct method of treatment or from peculiar conditions by which the patient may be surrounded. Of the drugs which have a more or less selective action upon the uterine muscular

tissue and tend to repress or reduce hemorrhage by astringency or by causing muscular contraction, mention may be made of gallic acid, ergot, hydrastis, and hamamelis, all of which are well known and have in more or fewer instances proved serviceable. If these drugs are to be employed it is better to use them in as concentrated a form as possible, in order to produce as speedy an effect as possible. The fact that they do not produce prompt relief in many cases in which they are tried is a sufficient argument with many physicians for abandoning their use entirely. The direct method of treating hemorrhage from the uterus by inspection and immediate application of hemostatic force is the one which appeals to the mind as the most sensible, and the one which is most likely to be efficient.

The patient may be placed in either the dorsal or the left lateral position, the former being preferable in the great majority of cases. The legs may be separated with the Clover crutch, or what is equally effective and always at hand—a twisted sheet passed behind the neck and secured around each leg at the knee joint, the thighs being flexed upon the abdomen. With a suitable self-retaining speculum in the vagina the entire field of operation is under control for either inspection or treatment, and there is no absolute indication for skilled assistants. Irrigation with water as hot as can be tolerated by the patient will cleanse the field, and with a volsella in the posterior lip of the cervix, the uterus may be brought downward sufficiently, or its immobility may be determined. If the bleeding is passive and proceeds from the uterine cavity, its cause being inherent in the ovum or decidua, it may usually be checked by the pressure of an intrauterine tampon of gauze, gently inserted, extending no higher than the os internum, and reinforced by a vaginal tampon carefully adjusted around the cervix. If the bleeding proceeds from malignant disease of the endometrium or from myoma, the tampon will probably be ineffective and abortion will result. If the bleeding proceed from myoma of the cervix the tumor should be removed as quickly as possible, of from cancer of the

cervix the entire uterus should be removed. The former is a constant menace to gestation, the latter to the woman's life, and as malignant disease develops with great rapidity during gestation the sooner it is extirpated the better.

Uterine contraction as a symptom of impending abortion does not usually attract the attention of the patient to the degree which its importance indicates. It may produce a minimum of pain or the pain may approximate to that of labor at term. In many cases dilatation of the uterine canal and expulsion of the ovum may be accomplished almost without the knowledge of the patient. If the attention is directed to the fact that the uterus is contracting, an alarm signal has been sounded which requires that there should be immediate cessation of all physical exertion. The more complete the rest the better the chance of avoiding accident. It will frequently be desirable to administer sedative drugs; the bromides, chloral, etc., to favor muscular relaxation. A tampon in the vagina sufficiently firm to sustain the uterus, without pressing upon it unduly, will also be serviceable in some instances, but no rule can be given for such a procedure, and it must not be forgotten that the tampon will sometimes excite or increase the concentration which it was designed to subdue.

In general terms uterine contraction does not necessarily signify the expulsion of the ovum, but it has such a result in the majority of cases, especially if its warning is disregarded by the patient.

Abortion is inevitable if hemorrhage or other discharge from the uterus is sufficient to detach the ovum from its uterine bed, also if diseases of the placenta or membranes interfere seriously with the nutrition of the ovum, or if integrity of the ovum is impaired by trauma. The various factors in producing such a condition have already been alluded to and do not demand repetition.

It often requires keen judgment to decide that abortion will be inevitable. The fundamental principle of treatment must unvaringly be to preserve the life of the foetus, but when this is

no longer possible the ovum becomes a foreign body with great possibilities for mischief, and should be removed as speedily and as carefully as possible.

The remarks which have already been made as to the position of the patient and the proper instruments to be employed when introducing a tampon are also applicable for this situation. It is unnecessary to say that the most rigorous cleanliness is imperative for the entire procedure. It is presumed that a sufficient time has elapsed to allow the uterus to empty itself and that it has failed to do it. Uterus and vagina having been carefully irrigated, dilatation of the uterine canal is next in order. The writer prefers for this operation the instrument devised by Sims; it is powerful, it is easily cleaned, it is readily applied. The dilatation should be sufficient to admit the index finger its entire length. Exploration may be made with the finger or with the curette, if one is sufficiently familiar with the latter instrument, the relations of the ovum to the uterine cavity determined, and detachment of the latter from the endometrium completed if it is not already complete. Then the uterus is to be steadied and depressed by the pressure of the fingers of the left hand through the abdominal parietes upon the fundus, and the ovum expressed or drawn out with the index finger of the right hand if possible. But this cannot always be done, and it may be necessary to introduce placental forceps, grasp the ovum gently but firmly, and with moderate traction deliver it. If the ovum has ruptured the procedure becomes more difficult. The foetus should be extracted entire, and this can usually be done by finding and drawing down one of the extremities, then slowly delivering the remainder. The cord will serve as a guide for the placenta and membranes, which should also be delivered with the finger if possible otherwise the placental forceps must be used. A caution is necessary against grasping blindly at the walls of the uterus with forceps, much harm being sometimes done in that way, the uterus itself being sometimes perforated. If the membranes have been removed piecemeal, the careful use of the cu-

rette is indicated for the removal of all debris upon the endometrium, and this is to be followed by intra-uterine irrigation and tampon. The latter must not be too firmly placed, as it may check in place of facilitating drainage. Its presence will usually be sufficient to excite the uterus to post partum contraction and control hemorrhage. A vaginal tampon may also be used if it seems to be indicated, but it is often unnecessary. The uterine tampon may be retained three or four days unless expelled by uterine contraction. The patient should be kept in bed on liquid diet for a week, vaginal douches of plain hot water or a 2 per cent solution of creoline being given at least twice daily after the tampon has been removed.

The foregoing remarks apply to cases in which foetal death is recent. There is a distinct class of cases in which the foetus is retained for varying periods after death has taken place. In those cases in which the ovum has ruptured and the liquor amnii escaped, decomposition with septic absorption results, and the consequences may be serious to the patient. In other cases the ovum is unruptured, the woman is unconscious of the cessation of foetal life, and may continue in ignorance until the absence of progressive abdominal enlargement, or possibly even a decrease in her size, together with a feeling of coldness or heaviness produced by the foreign body into which the ovum has been transformed, admonish her that something is wrong and compel her to seek medical advice. In such cases it should be the physician's aim to deliver the ovum entire, gradual dilatation being usually proper by means of a bougie in the uterus, or the intra-uterine tampon. Should the uterus fail to dilate and expel the ovum by such simple means, more active interference will be required; forcible dilatation will be necessary, and the uterus must then be emptied with the least display of force consistent with the conditions presented. The forcible method should also be adopted if the ovum has long been ruptured and retrogressive changes have occurred. In these cases we have a condition fraught with danger to the patient. The foetus is macerated, perhaps disin-

tegrated, and the patient is more or less septic according to her susceptibility to toxic influences and the length of time which has elapsed since the life of the foetus terminated. An operation in such cases is always a serious matter, but if it is carefully and aseptically done it certainly offers a better chance for life and health than to leave the decomposing mass within the uterus. Many of the cases of criminal abortion which are crudely and unskillfully performed are of this variety, and the death-roll from such operations is probably much longer than many of us suppose. Not a few cases which have been thus malpracticed upon by the professional abortionist come eventually into the hands of the regular physician, and if the result is unfavorable he is fortunate if he does not have to suffer the blame in place of the shameful criminal who escapes. This fact should put us constantly on our guard in dealing with cases of abortion, and should excite us to united and continuous opposition to the men and women who are to be found in every large community and who commit these detestable crimes.

120 East Thirty-fourth street.

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1. Some Unusual Cases of Inflammation of the Appendix Vermiformis. 2. Three Cases of Suprapubic Hysterectomy.

BY CHARLES CLIFFORD BARROWS, M. D.

I will ask your attention to the reports of eight cases, with specimens, selected from my work during the summer months, since we last met. I have selected these because each presents something of interest out of the usual run of cases of similar general character. There are four cases in which the appendix vermiformis has been removed, two in which inflammation of this organ complicated ovarian cysts—one that of ectopic gestation and one that of uterine fibroids and pelvic abscess.

There are two other cases of ectopic gestation, one other case of hysterectomy for uterine fibroids and intraligamentous cyst,

and one histerectomy for septic uterus and appendages. Some of the specimens are of unusual interest, as you will see:

Case 1. E. M., aged 29 years, a native of New York, a widow, and by occupation saleswoman; was referred to me by Dr. Hamlen on August 24, 1896. Her history shows that she began to menstruate at 15 years of age, and has been regular until four months ago. Since that time her menstruation has been profuse, lasting a week at each period. She has also had leucorrhœa, and has been obliged to take three douches daily to keep herself free from the irritating effects of this discharge. She has had one child, 11 years ago. Examination of the urine shows it to be normal in reaction, with 3 per cent urea; no albumin nor casts. She has had the ordinary diseases of childhood, and denies alcoholic and venereal history.

Her present illness began four months ago with severe pain in the suprapubic region, frequent and painful micturition, and profuse painful menstruation, recurring every two weeks, followed in the interval by severe leucorrhœal discharge. Examination reveals a uterus normal in size, deflected to the left of the median line by a tumor the size of a small orange situated in the region of the right ovary. On opening the abdomen by the median incision a small ovarian cyst the size of an orange was found on the right side. Adherent to the posterior aspect of the cyst was an elongated appendix vermiformis, inflamed and thickened, and bent upon itself. The cyst was removed, its pedicle being ligated with silk. The appendix was then tied off with catgut close to the cæcum and removed, the stump being touched with pure carbolic acid. The abdomen was closed without drainage with the figure-of-eight silkworm-gut suture.

The patient has made a satisfactory convalescence and is now well.

Case 2. Miss D., a trained nurse, was referred to me on July 6 by Dr. Gardner, with the following history: She is unmarried, and has always been well until six weeks prior to admission, when she began to suffer from severe pelvic pain, together

with frequent painful micturition and severe pain on defecation. She was much relieved during menstruation, but on the cessation of the flow the symptoms reappeared. She has been confined to bed for two weeks, and during the last five days has had fever, with daily chills and severe sweats. She suffers constantly from nausea, and vomits everything taken into the stomach.

When seen by me, the patient's temperature was 102.8 degrees Fahrenheit, pulse 128, small and wiry, and respiration 30. Her abdomen was greatly distended, tympanitic, and exquisitely tender to the touch.

Examination by the vagina revealed a uterus fixed in the pelvis by a mass of inflammatory material on each side and behind. The abdomen was so distended that nothing unusual in the region of the caecum could be discovered.

The abdomen was opened by the median incision, and the peritoneum found to be generally acutely inflamed. The origin of the trouble was found to be a suppurating ovarian cyst of the right side, to which was adherent an acutely inflamed appendix vermiformis. The cyst and appendix were removed, the peritoneum was cleansed as far as possible of serum and lymph, and a Mikulicz gauze drain was introduced through the abdominal incision to the bottom of the pelvis. The wound in its upper two-thirds was closed with silkworm-gut sutures. The gauze was removed on the eighth day after the operation. The patient rallied slowly, and for several days was desperately ill, but ultimately made a good recovery, and is now entirely well.

Case 3. The patient, a widow of 43, was referred to me by Dr. C. C. Knight, of Peekskill, with the following history: Four years ago she had removed from her uterus, by a surgeon of this city, a small fibroid polypus. She did not recover from this minor operation as she should, but developed in the course of the next month an accumulation of pus in the left side of the pelvis. This was opened by an incision along the line of Poupart's ligament on the left side, and also into the vagina in Douglass'

pouch. She improved slowly, and at the end of four months she returned to Peekskill, where she has been able for the past four years to follow her occupation, that of obstetrical nursing. Her occupation has, however, been constantly interfered with by repeated attacks of peritoneal inflammation, coming on usually at the menstrual periods, which have been very profuse and exhausting in character.

I saw her first on September 10 with Dr. Knight, of Peekskill. She was just completing a profuse menstruation of two weeks' duration, and was confined to bed, with temperature 102 degrees Fahrenheit, and pulse 110 to 120. She had some nausea and vomiting, frequent chilliness and sweats, and presented the general aspects of mild sepsis. She complained of much pain in her pelvic region, and especially in the right iliac fossa.

Physical examination revealed the presence of a firm, hard, nonfluctuating tumor, filling the whole pelvis, and immovable—apparently a uterine fibroma. Protruding from the cervix uteri was a small polyp, submucous in character. This tumor could be outlined above the pubes, and reached halfway up to the umbilicus. In addition to this apparent fibroid tumor there was a tense fluctuating tumor as large as a small cocoanut, reaching to the level of the umbilicus in the right iliac fossa. On pressure from above this was found to communicate with a point of fluctuation behind the cervix uteri in the vagina. This tumor was slightly movable, though to a very limited degree.

Dr. Knight informed me that this tumor always increased in size very markedly about the menstrual period and then gradually decreased until, at the intermenstrual period, it was scarcely perceptible on palpatation. There was never at any time any discharge of pus from the vagina or rectum.

A week after I saw the patient at Peekskill, Dr. Knight sent her to me here for operation. When she arrived her temperature was 99.6 degrees Fahrenheit, and her pulse 110. The pelvic tumor was as described above, but the fluctuating mass

had almost disappeared, being apparently of about the size of a hen's egg.

On the following day, September 18, I opened the abdomen in the median line. The pelvic cavity was filled by a nodular fibroid uterus to the right, and above which there was a flaccid tumor about as large as a walnut, with a process dipping down into the pelvis behind and adherent to the uterus. These tumors were covered by coils of intestine united to them by the firmest adhesions I have ever encountered.

It was with great difficulty that I succeeded in separating the adherent intestines. I then tied off the appendix vermiformis with catgut, touching the stump with pure carbolic acid, as is my custom. After tying the tubal and ovarian vessels on the top of the broad ligament, I found it impossible to lift up the fibroid uterus sufficiently to reach the uterine vessels, since the tumor was so firmly fixed in the pelvis. I then approached it by the vaginal route, clamping the uterine vessels and freeing the tumor. It was then drawn out without great difficulty. A Mikulicz gauze packing was placed in the pelvis and vagina and the abdominal wound closed with the figure-of-eight silkworm-gut suture. As the operation had been a tedious one, and the patient was suffering somewhat from shock, an intracellular saline injection was given. The patient has had a satisfactory convalescence and is now well. Examination of the tumor shows a hard, nodular fibroid of the uterus and a pus sac with very thick walls adherent to and communicating with the lumen of the appendix. It was then evident that this was the rout through which the pus had escaped at the times when the pus sac collapsed. I believe that the reason this occurred at the menstrual period was because the uterine tumor, being congested, was lifted higher in the pelvis; the appendix was thus relaxed, and the pus escaped through it into the colon. This pus, in traveling the length of the colon, was so mingled with faecal matter as not to excite notice when voided.

These cases of appendicular inflammation, complicating and masked by disease of the pelvic organs, are extremely interesting, and it seems to me that the report of such cases just now is very timely. You are all, I take it, familiar with the brilliant results that gynecologists have been having with operations upon the pelvic organs by the vaginal route.

This method appeals to all of us, and more particularly does it appeal to our patients. Many patients will submit to a colpotomy who will not permit a laparotomy. In this way we may possibly be tempted to adopt this route when it would be best to adhere to the older operation by the median suprapubic incision. These cases serve well to emphasize this note of warning, for in none of these cases would it have been wise or safe to approach the site of trouble by the vaginal route.

Case 4. The patient, a maiden lady of 56, was referred to me by Dr. Brown, of West Virginia. The patient had always enjoyed good health. Four years ago she had passed the menopause without trouble of any kind. In May last she noticed a swelling in the suprapubic region. There was no pain or tenderness connected with it, and she paid little attention to it. Soon, however, she realized that it was becoming larger, and consulted Dr. Brown, who advised her to come to New York for its removal. Physical examination revealed a nodular tumor as large as a human head occupying the median line and freely movable.

On September 17 I opened the abdomen by the median incision. There then appeared two tumors adherent to each other —one a nodular uterine fibroid, the other an intraligamentous cyst, each the size of a child's head. Tying off the upper part of the broad ligaments with silk sutures, I enucleated the cyst and removed the uterus with cervix entire, as is seen in the specimen I show you. There were but four ligatures required, one for each of the uterine and ovarian vessels. The cut edges of the vagina were turned in, and the peritoneum closed over it, the abdomen being closed without drainage. The patient's temperature was never above 99 degrees Fahrenheit, and she is now entirely well.

Case 5. The patient, an actress, 26 years old, married, was referred to me by Dr. Nary on September 8. Her family and previous history is unimportant.

Her present illness began seven weeks ago with severe cramplike pains over the lower portion of the abdomen. This was increased on micturition and defecation. During the week prior to admission the bowels had been constipated, the patient has vomited frequently, and the abdomen has become greatly distended. She has had frequent chills and profuse sweats. Temperature 103 degrees Fahrenheit, pulse 110, small and thready, respiration 28. Physical examination shows the abdomen much distended and tender to the touch; the uterus is somewhat enlarged and immovable, and the pelvic cavity is filled by a mass, boggy and tender to touch. As the patient was evidently suffering from septic peritonitis I operated at once, at 7 o'clock in the evening. On opening the abdomen by the median incision there were found numbers of small collections of flocculent serum here and there in the peritoneal cavity, encysted by intestinal adhesions. These varied from the size of an egg to that of an orange. Their contents were evacuated and the adhesions were broken down. The tubes and ovaries were the site of purulent accumulations, the right tube containing four ounces and the left two ounces of pus. All the tissues were extremely soft, and ligatures were seated with difficulty. Working as rapidly as possible, because of the condition of the patient, I removed the annexa together with the uterus entire. A Mikulicz gauze drain was carried through the opening in the vagina and the abdominal wound closed with silkworm-gut as usual. The operation consumed twenty minutes. The patient made an excellent recovery, and was discharged cured October 1.

Case 6. The patient, 34 years old, a native of Ireland, married, was sent to Ward 23, Bellevue Hospital, by Dr. Carter on August 10, 1896.

She has been married eleven years and has never had children—having miscarried once at four months. She has had the ordinary diseases of childhood, but otherwise has always been well. Gives a good family and personal history, with the exception that she takes whisky every morning and two or three pints of beer each day. Denies venereal history. Urine, specific gravity 1.010, urea 1 1-4 per cent, no albumin, microscopical ex-

amination negative. Her present illness began about one month prior to admission, when she was seized with violent pain in the lower part of the back and abdomen, accompanied by nausea and vomiting. This was accompanied by a bloody vaginal discharge, which continued up to date of admission. Has suffered daily from nausea and vomiting since the illness began. Physical examination shows the uterus normally situated, but somewhat enlarged. Behind it and to the right is a boggy mass filling the lateral and posterior fossae:

The abdomen was opened by the usual median incision. A large haematoma, shut in by adhesions and filling the space to the right and behind the uterus, was then encountered. The origin of the blood was found to be a ruptured tubal pregnancy, the break in the tube being about the middle third. The left ovary and tube were practically destroyed by inflammation. Caught in the inflammatory mass on the right side was the appendix vermiformis which had undergone parenchymatous inflammation. This was tied off, as in the other cases reported, and the haematoma together with the uterus and annexa removed complete to the vagina. Vaginal gauze drainage was established and the abdominal wound closed. The patient made an uninterrupted recovery; was discharged September 24, well.

I have reported the cases of appendicular inflammation because they have all been encountered in operations for other grave conditions, and have not been considered as the primary reason for making the operation.

We not uncommonly find the appendix inflamed and adherent in inflammatory conditions of the pelvic organs. Indeed, it is my custom always to examine this structure whenever I open the abdomen for any cause, but I have never before seen such a case as the second one reported to you, where the pus was discharged from a pelvic abscess through the appendix. Again, the combination of ectopic gestation and appendicitis is new to me.

In addition to these cases requiring hysterectomy together with appendectomy, I desire to report two other cases of ectopic gestation occurring in my practice during the summer, one of them demanding hysterectomy, the other a less formidable operation, for their relief:

Case 7. M. O., married, 31 years old, came under my care June 30, with the following history: The patient has had five children by natural labors, the last eight months ago. She has been well, with normal menstruation, until six weeks prior to admission, when she "took cold" during menstruation. The flow

was checked and she was seized with severe cramplike pains in the lower abdomen. During the past six weeks she has had repeated attacks of violent colicky pains in the abdomen, accompanied by profuse bloody discharge from the vagina. Two weeks prior to admission she had a very severe attack, accompanied by faintness and vomiting. She rallied in the course of twenty-four hours, but has continued to suffer from abdominal pain and weakness. Vaginal examination shows a uterus of twice its normal size, surrounded by a soft, boggy tumor filling the posterior and lateral fossae.

When the abdomen was opened by a median incision the cavity was found to contain large quantities of coagulated blood. This being removed, the right Fallopian tube and ovary were found to be the site of destructive inflammation. The left tube was distended and ruptured at the junction of the inner with the middle third. The ovaries, tubes, and uterus were removed, and the vaginal and abdominal wound closed without drainage. The patient made an uninterrupted recovery, and on August 3 was discharged, cured.

Case 8. L. D., married, 34 years old, was referred to me by Dr. Carter.

The patient has been married eleven years, but has never had children. She has been well and regular in her menstruation until six weeks prior to admission, when she missed her period. Two weeks after this she was seized with severe pain of a paroxysmal character in her abdomen and back, accompanied with nausea and vomiting. Three weeks prior to admission there appeared a bloody vaginal discharge, together with decided increase in the abdominal pain. The patient has been up and about, but has been unable to do any work for the past month.

Vaginal examination shows an enlarged uterine body, and to the right and behind the uterus a tense, semifluctuating tumor as large as a child's head.

The abdomen was opened in the median line and the tumor found to be a haematoma in the folds of the broad ligament, due to a rupture of a tubal gestation. The tube was tied off and removed with the clotted blood. The pelvis was sponged dry and the abdomen closed.

The patient made an excellent recovery, and was discharged on September 24, cured.

All of the cases characterized as tubal pregnancy were examined microscopically, and the diagnosis was confirmed in this way, although in none of them was a foetus found. Rupture had occurred prior to six weeks' gestation.

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CONTENTS.

MEDICAL SOCIETY PAPERS.

Cases of Abdominal Lesions. By B. Hatchett, M. D., Fort Smith, Ark. . . 97

EDITORIAL.

Quacks and Quackery 110

The Granberry Committee Report 111

THE ARKANSAS MEDICAL SOCIETY.

Officers of the Society 112

Report of Committee on State Medicine. By E. G. Epler, Chairman 113

COUNTY SOCIETIES.

Roster of County Societies 112

MISCELLANY.

Prostatic Hypertrophy 109

One of our Druggists 109

Professor Pancoast Dead 143

A large Dose of Arsenic 144

Typhoid Bacillus 144

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VOLUME VIII. MARCH, 1897. NUMBER 3.

Medical Society Papers.

Cases of Abdominal Lesions.

B. HATCHETT, M. D., FORT SMITH, ARK.

Case 1. Intestinal obstruction. I was summoned by telegram June 5, 1895, to D. C. A., a white girl, aged 12 years, a patient of Drs. A. Dunlap, of Winslow, and G. M. Richardson, of Brentwood. I was instructed to come prepared to do a laparotomy. On reaching her home next morning, the attending physicians present, I found the patient had been suffering from intestinal obstruction for about two weeks, the attack having come on rather gradually. Her abdomen was much distended, which rendered the making out of intestinal lesions by palpation very unsatisfactory. Temperature was normal, respiration and circulation somewhat accelerated; some vomiting, but not of stercoraceous matter.

The injection of a large warm enema, through a tube high up the colon, produced the discharge of a small amount of fecal water, and a paracentesis by means of a trocar served to liberate a quantity of gas. Considering that the child had appeared bet-

ter for twenty-four hours past, and the more important reason that the surroundings were anything but favorable for surgical work, it was decided to postpone more radical measures until a time when, if it were still found necessary to perform laparotomy the patient should be taken to St. John's Hospital, this city.

I heard nothing more of the case until October 30, nearly five months later, when I had a message that the patient would come at once to the hospital for operation. But she never came, and on the 3d of November I had a letter from her attending physician, who wrote that the patient had partially recovered from her first attack, that she had been able to attend school, etc., but would have occasional attacks of colic. She gained in strength slowly, until the 15th of October. After supper, on that day, she was seized with colic and gradually grew worse, with a repetition of all the conditions of the first attack, until death relieved her on November 2. Of course, no post mortem was made.

Case 2. Ovarian cyst. Mrs. A., one-half Indian, age 28 years, married. Case of Dr. McBride, of Fort Gibson, I. T., at which place the patient was operated upon on October 10, 1895. The operation, a coeliotomy with removal of a twelve-pound cystic ovarian tumor, was remarkable for its simplicity and absolute absence of all complications.

The abdominal incision was short, tumor easily emptied of contents and delivered, no adhesion whatever met with, pedicle severed and ligated, cavity lightly sponged, wound closed without drainage, and dressing all completed in very short time with no loss of blood. Chloroform anaesthesia.

A letter from Dr. McBride twelve days after the operation stated there had been no rise in temperature, that sutures had been removed, and the patient was virtually well.

This operation was done in a private house with ordinarily good hygienic environments, but the immediate preparations were quite surgically aseptic.

Case 3. Intestinal stenosis. A. M., a negro man, 56 years old, was a patient of Dr. J. R. Gant, of Fort Smith. The doctor

asked me to see his case February 6, 1896, and related to me something of his history. He had been called February 3, and found him complaining of pain in the bowels, and was told that several days previous he had suffered very greatly, especially about the region of the navel. Patient stated that he had contracted syphilis when a young man, but had enjoyed ordinarily good health with the exception of frequent attacks of colic during his later years.

The doctor's examination revealed a doughy tumefaction along the course of the colon from the rectum to the ileo-cecal region. A complete and protracted state of constipation existed. Proper treatment was administered which gave some relief in the discharge of part of the contents of the descending colon, but still at the time of my visit the large gut in its ascending and transverse portions was well filled. Remedies such as salts, high enemeta and massage were again resorted to with the effect of removing nearly, or quite all, of the accumulated mass. Patient was very feeble, had no pain or fever, unable to retain nourishment, and would vomit small amount of feculent matter. The question of operation was discussed, but, from various reasons, was decided against. During the succeeding forty-eight hours about the same conditions remained until the morning of the 10th, when soon after the effort of getting out of bed he died rather suddenly.

Owing to the superstitions and prejudices of the family, it was with much difficulty that an autopsy was secured, but it proved of much interest. The colon was found empty in its entirety, of normal size, color, etc.; so also the cæcum and appendix were unaffected. The prime lesion was situated in the small intestine about forty inches below the stomach. At this point was found a very tight stricture, evidently of long standing, about two inches in length, and surrounded on all sides by firm adhesions, binding all the adjacent structures together as a result of former and chronic inflammatory processes. The gut above the stricture was enormously dilated, very dark and its walls much

thickened. The stomach was very much enlarged, though in a semicollapsed state, being quite empty, while the pylorus was virtually obliterated by the general dilatation. The suspicions and watchfulness of friends prevented our securing specimens.

Case 4. Strangulated hernia. W. B., a negro man, 30 years old, history of perfect health. Was lifting heavy freight when he was seized with a sudden pain in the right abdomen.

I saw him the day following and found a well-defined, rather small, oblique inguinal hernia. He had some elevation of temperature, was vomiting and constipated.

The parts being by this time very sensitive, taxis was essayed with gentleness, but persisted in until reduction of the hernia was seemingly complete. The next day his general condition was about the same, vomiting, constipation, etc., continuing, no tumor, however, being discernible.

I determined to do an operation for the relief of what I believed to be an incompletely reduced hernia, and gave instructions at the hospital for preparations to be made accordingly, but on calling consultation operative interference was decided against, the prevailing opinion being that the existing trouble was a localized peritonitis. The next day, being the fourth of the attack, unfavorable symptoms were decidedly more pronounced. Collapse set in about noon, and death speedily ensued.

The autopsy revealed a knuckle of the ileum incarcerated and firmly held in the grasp of the internal abdominal ring. About three-fourths of the lumen of the viscus was thus strangulated, gangrenous and apparently upon the point of breaking down. There was no escape of feces, and but little inflammation of surrounding tissues.

Case 5. Recurring appendicitis. H. K. F., a white American gentleman, aged 36 years, a banker, residing in some of the Northern States and traveling in the South. History of perfect health with the exception of one attack of abdominal trouble two or three years previously, which gave him great pain and confined him to bed for several days. I was called to see him

the night of April 16, 1895, and found him suffering intensely with all the subjective symptoms of acute appendicitis. He had been suddenly seized with pain quite early in the morning of the same day, and consulted a physician, who gave him remedies for indigestion. I administered a hypodermic injection of morphia and atropia, and gave orders for hot local applications, etc., which gave him comparative comfort during the night. Next day symptoms continued with increased intensity, and a well marked induration began about the caecum.

The case ran a very severe course for two weeks with a greatly enlarged tumefaction, much pain, constipation, vomiting, some elevation of temperature, disturbed circulation, delirium, etc. An operation was advised and insisted upon, but as persistently declined. At the end of two weeks his condition began to improve and in ten days more he was able to be about, but had some pain all the while. The induration and tenderness in the ileo-coecal region remained until he left the city, some days later. I heard nothing more of him until very recently a friend of his informed me that Mr. F. had lately died from an attack of appendicitis.

Case 6. Acute suppurative appendicitis. J. F. W., a white man, aged 41 years, a merchant at Vian, I. T.

I reached his home in response to a telegram on the night of December 4, 1895, Dr. Jones, of Vian, present and attending him. He gave a history of continued good health up to within a few weeks of his present illness, when he had been troubled with constipation, "biliousness," etc. He began to suffer pain in his abdomen several days before I saw him, and had been unable to have an action from the bowels, notwithstanding strong purgative medicines and rectal enemeta had been persistently employed. Upon examination I readily made a diagnosis of appendicitis. There was a small induration in the ileo-coecal region, his abdomen was slightly distended and quite sensitive over the caecum. He vomited frequently, had no rise in temperature, but a very badly disturbed circulation.

I advised an early operation, which was readily agreed to, but owing to lack of assistance and proper surroundings it was thought best for the patient to go to St. John's Hospital. Operation was made on December 5, with the assistance of Drs. Saunders, Eberle, Brooksher and Cooper. A lateral incision was made about four inches in length, the affected parts quickly reached and found to be very extensively involved in the process of inflammation. Some adhesions were already formed, but presented only a slight barrier to reaching the appendix, which was ligated close to the gut and removed. Some pus was found diffused in the peritoneal cavity and among the intestines, which were distended with much gas, congested, dark and seemingly incapable of motion from peristaltic paralysis.

All parts were thoroughly cleansed and sterilized, and the wound partly closed, leaving room for gauze packing and drainage.

The patient rallied from the operation quite well and progressed favorably for eighteen hours, when he began to decline, and died thirty-six hours later.

There was at no time any alvine discharge in spite of every effort in that direction. The vermicular expulsive motion of the intestines was entirely absent as a result, I presume, of the shock of inflammation. To this I am inclined to attribute the immediate cause of his death.

The amputated appendix, which I show you, is a very short one, not more than two inches long, and very much enlarged. It contains, as you will observe, a concretion which, when it was fresh, was seemingly of the size and very much the shape of an almond. A small round eyelet, or suppurating opening, is visible just over the prominence of the concretion, from which the pus escaped into the peritoneal cavity.

Case 7. Suppurative appendicitis. T. S. was a white American farmer, 21 years old. Case in St. John's Hospital during the service of Dr. D. M. Gardner.

He was attacked about October 8, 1895, and treated by country physicians, who advised him that he would have to sub-

mit to a surgical operation. He came to this city and walked around the streets with his hands locked over his abdomen, suffering great pain, until he was admitted to the hospital, where I operated on him October 19, 1895, assisted by Drs. Gardner, Wright, Breedlove, Brooksher and others. At the time of operation his condition was most deplorable—temperature subnormal, radial pulse, barely discernible, body surface bathed in cold perspiration, mind wandering, etc.,—a state of such profound collapse that it was questionable whether or not it was wise to subject him to surgical interference.

Recognizing the existence of pus, but being uncertain as to its origin, the incision was made in the median line. On cutting through the abdominal muscles, and before entering the peritoneum, a large pus cavity was entered, and great quantities of offensive matter discharged. It was then found that the pus formation had begun about the caecum and had burrowed its way along between the muscles and peritoneum, forming a large cavity which reached beyond the median line to the left, to near Poupart's ligament below, and to the edge of the ribs above. This immense sac was thoroughly cleansed and packed lightly with gauze in the hope that sufficient drainage would thus be secured. The patient came off the table in a better shape than he went on, and did well for two or three days, but the drainage was not satisfactory. So a second operation was done October 23, 1895, making the incision immediately over the caecum Firm adhesions were found on every hand, and several pus pockets discovered, emptied and cleaned. The site of the appendix could not be reached without doing much violence, and the peritoneal sac being to all appearances well protected, the whole was well sterilized and loosely packed with gauze.

Future dressings were made daily by Dr. Gardner during the remainder of his month, and by Dr. St. Cloud Cooper, who served at the hospital during November. The patient's progress was remarkably good up to about the middle of November. He had gained in flesh and strength, with good appetite and diges-

tion. The enormous cavity and wounds had well progressed in the healing process, when it was discovered that a small amount of pus was welling up from the bottom of the latter wound. Rightly judging this to come from some undiscovered pocket, the sinus was enlarged by tearing and the new pocket drained. But the man began to decline, and died apparently from inanition November 23, 1895.

The post mortem revealed numerous small pus pockets situated throughout the abdominal cavity, many with communicating sinuses, while others apparently had no communications. The intestines were matted together by strong adhesions and all firmly attached to both anterior and posterior parietes. The appendix was found to be sloughed off near the cæcum, its end remaining patulous. An enterolith, or appendical concretion, the size of a large cherry seed, lay loosely in the internal iliac fossa, posteriorly to the blind end of the colon. You will observe some of these pathological conditions in the specimens sent around for your inspection.

Case 8. Abscess of liver, and old typhlitis. W. P., Irishman, 37 years old, foreman of railway contractor's construction gang.

The patient was brought to me in a buggy by his employer October 22, 1895, on which day I had him admitted to St. John's Hospital. He had continued fever with recurring chills at irregular intervals, was anemic and troubled with diarrhœa. He gave a history of former malaria and attacks of pain in his abdomen, severest on the right side.

Treatment given for malaria and suspected hepatitis. In a few days the lines of enlargement of the liver were quite distinct, and the presence of pus diagnosed. This condition increased from day to day, patient preferring nonoperative measures, until November 8, 1895, when he died.

At the autopsy extensive pus accumulations were found in the liver, extending for the most part upward, pushing the diaphragm against and partially collapsing the right lung. Other

internal organs were found practically in a normal state until the caecum and appendix were reached. These were firmly bound down by adhesions, demonstrating former inflammations. The appendix was, with much difficulty, liberated from between the tightly adherent folds of the ascending meso-colon. The caecum was, with even more difficulty, released from its posterior attachments.

You observe from the pathological specimens I show you of the case something of the remains of the extraordinary neoplastic adhesive tissues found. The appendix is in a healthy state, nothing abnormal connected with it except it be its great length, ten inches. You also observe a large rough-edged opening, caused by tissue sloughing, in the posterior wall of the caecum, near the base of the appendix. This orifice was entirely surrounded by very firm adhesive tissues which completely prohibited the escape of the contents of the bowel into the peritoneal cavity. This presents a condition from which it might not be unreasonable to presume that the typhlitic inflammation was the primary lesion, that sloughing ensued, and that septic material was conveyed by the circulation to and lodged in the liver, setting up a new point of infection, which rapidly spread and resulted in death.

Case 9. Appendicitis. Dr. J. H. Foster invited me on November 11, 1895, to see with him Mr. A. M., a German carpenter, aged 34 years. The man had been sick a week or ten days, general malaise, slight pains in the abdomen, etc., but able to be up most of the time. Upon examination a small characteristic tumefaction was easily made out; ileo-coecal regions sensitive, etc. Case at once diagnosed as appendicitis and suggestion made that operation would probably become necessary. To this the patient readily and sensibly consented. In fact, be it said to his credit, he was rather anxious that the operation be made.

He was taken to St. John's Hospital and closely watched. On the slightest increase of induration and disturbance of circulation the operation was done November 13, 1895, assisting, Drs.

Foster, Saunders and others. The incision made over the caecum readily brought into view that organ surrounded by adhesive attachments. An ounce or more of pus was liberated. The adhesions being very firm were not interfered with in an attempt to secure the appendix. One rather peculiar condition existed in that a considerable part of the great omentum was attached to the anterior wall of the caecum, too strongly attached to attempt liberation, and it was allowed to remain.

After thoroughly cleansing, the wound was gently packed with gauze and antiseptically dressed. Future dressings were made as required, the wound allowed to heal from the bottom. There was no rise of temperature, further pain, or any untoward symptoms, and the patient went on to a rapid and complete recovery.

Case 10. Laparo-splenectomy. Mrs. N. E. B., a native of Arkansas, but a citizen of South Canadian, I. T., applied to Dr. L. L. Saunders and myself for treatment August 5, 1895, and was admitted to St. John's Hospital. Her clinical history, as she told it, was that she was 35 years old, married eighteen years and had nine children. She had one premature birth four years ago, from which time she dated the beginning of her ill health, though she had borne one child to full term since. She had been confined to bed with fever and pain for four months previous to our seeing her. Six years ago she had had an enlarged spleen which gave her considerable trouble, but recovered with treatment. Two years later, and soon after her miscarriage, she noticed a small tumor low down in her abdomen in the median line. It gave but little pain and grew slowly until she was stricken down with fever, when its growth became rapid and caused much distress.

At the time of our first examination the patient was exceedingly feeble, anemic and nervous. Temperature 103 degrees Fahrenheit. Her abdomen was considerably distended and painful to touch at all points, evidencing the existence of a diffused peritonitis. A large, round

semiresilient tumor prominently projected upward from a low position in the pelvis. Diagnosis as to character of tumor doubtful, but our opinion, as well as other physicians who saw the case, was given that it was ovarian in origin. Her condition was by no means favorable for immediate operation, and as I was on the point of leaving the city for a vacation, Dr. Saunders kindly undertook the task of caring for her for one month, and succeeded in improving her general state greatly, though she still had fever and some peritonitis.

On September 3, 1895, after thorough preparation by the nurses of the hospital, I proceeded to operate with the assistance of Drs. Saunders, Eberle, Gant, Brooksher and Cooper. Under the A. C. E. mixture narcosis a median incision was made below the umbilicus, when the tumor was recognized as the spleen. The incision was then prolonged, adhesions broken loose, and the enlarged organ was delivered from the pelvis and lifted into the wound. The pedicle happily proved to be rather long and was easily handled, with no loss of blood. It was transfixed with a Crawford needle, and the two equal halves separately ligated with strong braided silk a clamp was applied at a more distal point, and the removal was completed by cutting between ligation and clamp with strong scissors. The stump was sterilized, found to be safe from hemorrhage, and dropped into the abdominal cavity. The usual laparotomy toilet was carefully made, and the patient came out of the ordeal as well as could be desired.

The extirpated spleen weighed six pounds. Its surface was of a dark slate color, dotted over at various points with cystic accumulations of extravasated serous fluid. The capsule was easily torn and showed the pulp and trabeculae of the organ to be very much disorganized, broken down and presenting that condition of degeneration which has been designated as "splenic mud." Under the microscope this brownish purple substance, or "mud," was shown to be composed largely of dark granules, granular bodies and broken down, extravasated blood cells. The

same material was found thickly coating the internal walls of the large blood vessels at the point where they were severed in the pedicle.

The patient did as well after the operation as one could wish after the most simple laparotomy. Her fever began to decline almost at once, and never ran higher than 99 after the third day. Pain subsided, peritonitis gave way, appetite returned and a general feeling of comfort was enjoyed during the days of convalescence. The sutures in the abdominal wound were removed on the tenth day with no sign of pus—not even the smallest indication of a stitch hole abscess. She walked on the thirteenth day after the operation, and on the eighteenth day left for her home feeling quite well, with good complexion, appetite, digestion, etc.

On the 6th of October, two weeks after her discharge, I had a letter from Mrs. B., stating that she weighed ninety-three pounds on reaching home, and that her weight was 103 pounds at writing. She had a little fever at different times, and an occasional sharp pain in her bowels.

November 10, a month later, she writes that her weight is 125 pounds, complexion and appetite good, some pain in lower abdomen, no appearance of menses.

A few days ago, being eight months since the operation, I had the following letter from my patient, dated April 21, 1896:

"Dear Doctor—Your inquiry about my health has been received. In reply I will state that I am in better health than I have been for ten years, and am as well as I ever was in my life. My appetite is good and my complexion is clear. I have no pains as a result of my former ailment, and can only speak words of praise and thankfulness for my recovery."

I made several microscopical examinations of this woman's blood, and found the relative proportion of the red and white corpuscles but little if any more disturbed than would ordinarily occur in any simple anemic condition. Lukemia was thus shown to be absent, and hence the exceedingly good results ob-

tained, for I believe most operations prove rapidly fatal when the lukemic state exists.

Unfortunately our knowledge of the physiology of the spleen is still left in a state of confusion, and hence the discussion of the propriety of its removal under various conditions is unsatisfactory. The statistics of the comparatively few operations so far recorded are not encouraging.

I hope to be able to watch the progress of this case in the future, and to report to this society something of the organic changes resulting from splenectomy.

Prostatic Hypertrophy.

In a paper read before the British Medical Association, at its recent meeting, Dr. McEwen stated that he had operated in five cases, three by double orchectomy and two by resection of the vas deferens. His conclusions were: 1. In many cases castration causes more or less atrophy of the prostate. 2. Atrophy occurs most commonly when the prostate is soft. 3. It is of most value when the enlargement is general. 4. Cystitis may be relieved or cured. 5. In marked cystitis drainage is better. 6. It may do away with the necessity of the use of the catheter. 7. Or the catheter may be required less frequently. 8. Resection of the vas deferens acts more slowly, but the effect is similar.—British Medical Journal.

One of Our Druggists.

Dr. John B. Bond, Sr., reached his sixtieth birthday November 24, 1896, and he writes that he is "in perfect health, strength and vigor; that he can read without glasses (he means those big show bills), can outrun, outjump, throw down and whip any of his four grown sons;" and it is easy to see that he can blow as hard as ever. We will not publish what else he says he can do—even cold, unfeeling type cannot go that far—but we do rejoice with him, that he has reached the top of the hill with so much of life and vigor, and trust that the descent on the other side may be long, smooth and easy.—Meyer Bros. Druggist.

THE

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Editorial.

Quacks and Quackery.

It may be said that the percentage of dishonesty is much less in the medical than in other professions, the undue prominence naturally given to fraudulent practitioners by newspaper advertisements would almost lead us to suspect the reverse. The columns of our papers teem with announcements of "all cures," "specialists," "medical missionaries," accompanied by

portraits which might serve as a likeness of a successful faro dealer or confidence man. Nature tells the truth after all. She puts the lineaments of fraud where they belong, and the wood cut in this respect does its duty well. The public unfortunately patronize these persons to the detriment of their health and their pocket-books. It will require, it seems, several years more of bitter experience on their part before public sentiment will be strongly behind a movement to rid the community of these individuals. It would seem that no outrage is great enough to bring these men within the clutches of the law. The writer recalls one case coming within his personal knowledge, where an unfortunate sufferer lingered in the terrible agonies of a general peritonitis until death relieved him, while his attending "medical missionary" rubbed him with "nectar of life." The grand jury in this instance found no violation of the law. Patience stands exhausted before such a condition of things. It becomes the duty of all medical men to arouse the people until they will protect themselves..

The Granberry Committee Report.

The customary cigarette bill has appeared in the legislature. It has been adversely reported upon by the senate committee upon public health, of which Dr. Granberry is chairman. The doctor states that no reliable evidence has been submitted which would show that cigarettes contain anything else than tobacco, and therefore no injurious effects can arise from their use other than those following the use of tobacco in any form. He fails to see why we should legislate against one form of tobacco, and not against others.

There is no question but that the doctor voices the sentiments of medical men in this matter, however the lay press may differ from him. The JOURNAL will watch with interest the combat between medical conservatism and the gentlemen who are reforming all the monopolistic evils in the State.

The Arkansas Medical Society.

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The *Place* of Meeting—Little Rock, Ark.

The *Time* of meeting—Second Tuesday in May, 1897.

County Societies.

Roster of County Societies.

COUNTY.	MEM'S	PRESIDENT.	SECRETARY.	MEETING PLACE.	STATED MEETINGS.
Ashley	5	I. J. Newton, Hamburg	J. W. Simpson, Berea	Hamburg	
Benton	22	W. G. Floyd, Bentonville	C. E. Hurley, Bentonville	Bentonville	Bimensal.
Boone	16	J. T. Tipton, Lead Hill	L. Kirby, Harrison	Selected by vote of society	Quarterly.
Carroll and Eureka Springs		R. P. Moore, Oak Grove	L. W. Weaver, Eureka Springs	Eureka Springs	Quarterly.
Garland Hot Spgs Med So	16	H. P. Collings, Hot Springs	E. C. Hayes, Hot Springs	Hot Springs	Monthly.
Independence	23	T. J. Woods, Batesville	J. W. Case, Batesville		Quarterly.
Jackson	15	J. M. Green, Newport	J. M. Jones, Newport	Newport	Monthly.
Jefferson	30	J. W. Withers, Pine Bluff	J. P. Runyan, Pine Bluff	Pine Bluff	Monthly.
Lawrence	14	N. R. Townsend, Black Rock	Albert Thornburgh, Sedgewick	Selected	Monthly.
Mississippi	5	W. R. Harrison, Bardstown	C. A. Turner, Osceola		
Phillips		D. A. Linthicum, Helena	M. Fink, Helena		Monthly.
Pope	10	L. T. Ragsdale, Pott's Station	J. A. Westerfield, Atkins		
Prairie	8	F. A. Hipolite, DeVall's Bluff	J. R. Lynn, Des Arc	Des Arc	Annually.
Pulaski L. R. Med. So.	45	A. H. Scott, Little Rock	F. Vinsonhaler, Little Rock	Little Rock	First and third Monday of each month.
Saline		D. N. Fisher, Benton	J. M. Phillips, Bryant	Benton	
Sebastian	26	E. G. Epler, Fort Smith	J. D. Southard, Fort Smith	Fort Smith	Every second Tuesday.
Washington		John Young, Springdale	T. W. Blackburn, Fayetteville		

Report of Committee on State Medicine Arkansas Medical Society, Fort Smith, Ark., 1896.

BY E. G. EPLER, CHAIRMAN.

A number of important subjects have presented themselves to the Committee on State Medicine for consideration. Of those that seem most important are the following:

1. What are the more prevalent diseases in the various parts of the State; and what are the conditions that seem to favor their development?

2. What epidemics have prevailed; how did they commence; what means were adopted towards preventing, controlling or eradicating them, and what were the results of such efforts?

3. To what may be ascribed the greater susceptibility to disease and higher rate of mortality of the colored race, as compared with the white; racial peculiarity or bad hygienic surroundings?

4. What is the average rate of mortality throughout the State? Is it much greater than elsewhere, as has been generally believed?

These and allied questions are of great importance. If they might be discussed earnestly and freely by the people in the various communities and legislative bodies of this State much might be done towards awakening the masses to dangers that may threaten them, and bringing about such legislation as will ultimately improve the general health throughout Arkansas.

To one who would study closely social problems, the relation of climatic conditions to general health and etiology, Arkansas is a most inviting field for original research, possessing mountain ranges of moderate elevations, river valleys, low-lying, rich alluvial regions, and well drained uplands; there is a great variation in topography, a corresponding difference in climatic conditions such as atmospheric pressure, temperature and humidity within a relatively small area. White and colored people live in the same communities and are subjected to the

same influences. Then the clearing away of forests, tilling virgus soil, draining of swamp lands, alter one way or another the condition of the inhabitants of certain parts of the State. It would seem that a careful study of these varying conditions and their effects upon the public health would be original as far as this State is concerned and profitable. Hence I say Arkansas is an inviting field of research to the climatologist and physician.

At present such a study is but preliminary to more thorough research. To be sure the national government has established many stations for observing meteorological phenomena, and the results of this work are at hand, but there are but two towns I believe where mortality records are faithfully kept. Data as to the rate of mortality in any place must be obtained from undertakers and physicians. The United States Department of Agriculture has been collecting mortality rates and other data from over the entire country and publishing these data for the information of all concerned. The work is valuable and instructive and authoritative. It is sent to all who make reports. From these government reports I have compiled table No. 1, in which certain statistics are given for the twenty-six weeks ending December 28, 1896. My purpose is to compare the mortality record of Fort Smith with that of about 155 towns of the United States. The table is almost self-explanatory. The general rate of mortality has been calculated for each week per thousand population per annum. The first line shows the weekly record for the entire country, the second line for Fort Smith, Ark. I counted still births as deaths in making my reports. This was not required, I have learned. As there were about fifteen, the rate as given for Fort Smith is too large. Yet by reading the column of averages at the right hand end of the table it will be seen that the Fort Smith rate is two per thousand less than the general rate. The rate of mortality of children under 5, and the rate due to the various diseases specified in the table were calculated per thousand population for each week. This should be multiplied by fifty-two to get the annual rate. The per cent of total deaths due to phthisis pul-

monalis, tuberculosis pulmonis or consumption has been calculated week by week. The 155 towns (about the average of the places reported on) have about 12,000,000 people, or one-fifth to one-sixth of the population of the entire country. Fort Smith has a population of about 14,000. As set forth in the table, the relatively small death rate at Fort Smith due to phthisis is certainly very gratifying. The same is true of typhoid fever. Though I reported still births as deaths the rate of mortality of children under 5 is less per thousand population than that throughout the portions of country of which similar reports have been made. The records as regards pneumonia and inflammatory diseases of the intestinal tract are reassuring. We have not been so fortunate as to the malarial type of fever known as intermittent. It is to be regretted that the department has not seen fit to make special record of remittent and continued malarial fevers. Though cases of the latter are not so numerous as the cases of intermittent, yet they are more fatal.

The maximum and minimum temperatures at Fort Smith have been given for each week. Many other details might be commented upon. The table has been so constructed it may be read at a distance. Suffice it to say that if the same rates prevailed throughout the State, Arkansas need not be ashamed of her record or of the state of general health prevailing within her borders. Yet the data at hand are so few, anything like a general summary is impossible. Circular letters were sent to all of the members of the committee calling for information. About one-fourth replied. The trouble these gentlemen were put to was great. Nearly to a man they bemoaned lack of good records. The results of their labor confirm in a general way that which is set forth in the table No. 1.

TABLE No. 1.—Mortality Record, Fort Smith, Ark., and 155 Towns U. S., July-December, 1895.

		July 6.	July 13.	July 20.	July 27.	August 3.	August 10.	August 17.	August 24.	August 31.	September 7.	September 14.	September 21.	September 28.	October 5.
General Mortality, rate per annum per 1,000 pop.	U. S.	20.4	22.6	23.1	21.3	20 5	20.8	21.5	19.4	19.8	18.1	19.	19.1	19.9	17.7
	Ft. S.	11.	26.	3.7	14.8	7.4	22.2	14.8	7.4	27.7	22.2	25.9	22.2	25.9	18.5
Children under five, weekly rate per 1,000 pop.	U. S.	.107	.18	.21	.20	.158	.194	.152	.166	.164	.152	.162	.153	.162	.138
	Ft. S.	....	28	.07	.14	.07	.35	.07	.07	.42	.14	.28	....	.21	.28
Phthisis Pulmon., weekly rate per 1,000 pop.	U. S.	.034	.038	.36	.036	.035	.048	.034	.036	.036	.034	.036	.039	.037	.036
	Ft. S.	....	....	....	....	....	.07	....	....	....	....	.07	....	....	....
Phthisis, per cent of total deaths	U. S.	8.6	8.7	9.	9.	8.9	1.20	8.4	9.8	9.8	9.8	9 9	10.5	9.5	11.
	Ft. S.	....	....	....	....	....	16.6	....	....	....	....	14.	....	....	....
Typhoid Fever, weekly rate per 1,000 pop.	U. S.	.003	.0058	.058	.0059	.0072	.0077	.001	.009	.0089	.0085	.0092	.012	.011	.0097
	Ft. S.	....	....	....	....	....	....	.07	....	....	....	....	....	....	....
Pneumonia, weekly rate per 1,000 pop.	U. S.	.011	.012	.013	.013	.011	.016	.014	.01	.011	.012	.014	.012	.015	.012
	Ft. S.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Intermittent Fever, weekly rate per 1,000 pop.	U. S.	.00075	.00073	.0012	.0012	.0012	.0036	.0019	.0013	.0028	.0022	.0024	.0023	.0024	.0022
	Ft. S.	....	....	....	....	....	....	....	....	.07	.14	....	....	....	....
Enteritis, weekly rate per 1,000 pop.	U. S.	.06	.092	.098	.088	.068	.083	.066	.052	.057	.044	.052	.044	.045	.022
	Ft. S.	....	....	....	....	....	.14	....	....	.07	....	.21	....	.07	.21
Maximum temperature	Ft. S.	90	91	96	94	91	91	93	96	94	94	97	94	90	82
Minimum temperature	Ft. S.	64	61	66.8	66	64	63	68	65	66	66	68	67	49	37

TABLE 1.—*Concluded.*

		October 12.	October 19.	October 26.	November 2.	November 9.	November 16.	November 23.	November 30.	December 7.	December 14.	December 21.	December 28.	Av. 26 Weeks.	
General Mortality, rate per annum per 1,000 pop.	U. S.	17 9	18.3	17.8	17.8	17.7	16.6	16.7	17.0	16.6	17.2	18.6	17.0	18.9	U. S.
	Ft. S.	25.9	37.0	14.8	7.4	26.0	3.7	22.	18.5	.....	7.4	3.74	3.74	16 6	Ft. S.
Children under five, weekly rate per 1,000 pop.	U. S.	.122	.125	.115	.101	.099	.098	.097	.087	.105	.11	.11	.16	.120	U. S.
	Ft. S.	.07	.....	.14	.07	.07	.....	.14	.21	.....	.....	.07	....	.118	Ft. S.
Phthisis Puimon., weekly rate per 1,000 pop.	U. S.	.036	.037	.037	.043	.039	.034	.037	.038	.039	.041	.038	.036	.0374	U. S.
	Ft S.	.....	.....	.....	.....	.....	.07	.07	.....	.....	.....	.....	.....	.010	Ft. S.
Phth sis, per cent of total deaths	U. S.	11.	10.7	10 8	12.8	13 6	10 6	11.6	11.7	12 4	12,1	10 8	10 9	10.5	U. S.
	Ft. S.	.....	.....	.....	.....	.....	10.0	16.6	.....	.....	.....	.....	.....	5.6	Ft. S.
Typhoid Fever, weekly rate per 1,000 pop.	U. S.	.011	.0118	.010	.010	.010	.008	.007	.0046	.007	.0068	.007	.007	.008	U. S.
	Ft. S.	.....	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0054	Ft. S.
Pneumonia, weekly rate per 1,000 pop.	U. S.	.016	.020	.026	.027	.029	.026	.024	.027	.034	.038	.045	.044	.0246	U. S.
	Ft. S.	.....	.....	.....	.....	.07	.....	.....	.07	.....	.....	.....	.....	.0054	Ft. S.
Intermittent Fever, weekly rate per 1,000 pop.	U. S.	.0024	.0022	.0027	.0020	.0009	.0016	.0010	.0020	.0011	.001	.001	.0008	.0246	U. S.
	Ft. S.	.....	.07	.07	.....	.....	.....	.07	.....	.....	.....	.....	.....	.0054	Ft. S.
Enteritis, weekly rate per 1,000 pop.	U. S.	.019	.017	.010	.013	.011	.0097	.0076	.0084	.0089	.0095	.0095	.009	.0017	U. S.
	Ft. S.	.21	.....	.....	.....	.14	.....	.....	.07	.....	.07	.07	.....	.016	Ft. S.
Maximum temperature	Ft. S.	79	82	80	72	72	65	79	53	62	62	66	64	.....	U. S.
Minimum temperature	Ft. S.	36	34	33	30	37	28	24	24	15	24	36	24	.....	Ft. S.

The reports discuss more or less thoroughly several subjects pertaining to State medicine. They speak for themselves.

Dr. A. G. Henderson, of Fayetteville, speaks for Washing- County, one of the most thrifty, populous and interesting regions in the State. The report is as follows:

As the representative of the Committee on State Medicine from Washington County, I have but few data to present as a supplement to the general report. Washington County enjoys the unique reputation of surpassing any other county in the State in these particulars: (1) It is the healthiest; (2) It is the home of the big red apple; (3) The highest spot of earth in Arkansas is situated within her borders. The more common diseases of a serious nature which prevail in this county are pneumonia, typhoid fever, tuberculosis. The diseases that prevail here and are not so serious are chronic gastritis, rheumatism, functional heart disease, bronchitis and malarial manifestations.

During the year 1895 there was a severe wave of malaria that passed over the entire county. The oldest physicians say that there was more malarial sickness than has occurred since 1875. We believe the cause to have been the excessive rainfall in the summer, followed by dry and hot weather. From July 5 to August 6 the total rainfall was eleven inches. From August 7 there was very little rain until November 1, and during that period the temperature rarely fell below 60 degrees day or night. In the majority of instances the malaria manifested itself in remittent and intermittent fevers. There were a number of cases of pernicious intermittent and pernicious remittent fever. We had a few cases of scarlatina and diphtheria in the county, but thanks to the efficiency of the Board of Health of Fayetteville and the watchfulness, care, prudence and good judgment of the physicians in the other towns of the county, the diseases did not spread. We have had during the year, I suppose, the usual number of cases of mumps, measles, whooping cough, chickenpox. So far, I have not heard of a death from any of these diseases.

I send herewith a table setting forth approximately the number of cases of the more popular diseases, the mortality rate in proportion to the number of cases and the population—38,000:

TABLE No. 2.—Washington County, March 1, 1895—March 1, 1896. Population, 38,000.

Cause.	No. Cases.	No. Deaths.
Tuberculosis	90	54
Pneumonia	243	23
Typhoid fever	336	30
Intermittent fever	185	..
Intermittent fever, pernicious	2	.....
Remittent fever	682	.....
Remittent fever, pernicious	59	27
Organic heart disease	24	10
Dysentery, simple	85	.....
Dysentery, malignant	8	4
Gastritis, acute	135	.....
Gastritis, chronic	160	16
Bronchitis	77	.....
Meningitis	27	16
Diphtheria	27	15
Scarlatina	40	2
Neuritis	28	.....
Pleuritis	12	1
Typho-malarial fever	75	19
Total	2,295	217

A. G. HENDERSON, Fayetteville, Ark.

Lee County is on the opposite side of the State from Washington County. Dr. Robinson, of Marianna, is the representative for this county, and reports as follows:

To the Chairman of the Committee on State Medicine:

As a member of the above committee I offer the following as a report of the diseases, deaths, etc., of our city for 1895:

Our population is about 2,000, two-thirds being white and one-third colored, the mortality of the latter having been much greater than that of the former, owing to the lack of proper medical attention and sanitary surroundings, which I will hereafter explain.

The diseases in this locality are largely of malarial origin, it being in close proximity to the Mississippi and St. Francis River bottoms. Though whilst almost every phase belonging to this class of diseases is met, we have thus far enjoyed almost com-

plete immunity from typhus and typhoid fevers, diphtheria and phthisis pulmonalis, except the last named, which is occasionally met with in the colored people, the nature being of that rapid, progressive consumption characteristic of the negro race.

Malarial haematuria makes its appearance in epidemic form about once in three or four years, the mortality being 15 to 20 per cent. The most fatal of all our maladies is pernicious fever, though fortunately, we do not have very many of such cases. About four-fifths of these cases are fatal, as the premonitions are obscure, and most of patients are found by the physician in a dying condition. The tertian type of this, as in all other malarial troubles, is the form usually met by the practitioner.

We were visited during the year by few of the ordinary contagious or epidemic diseases, scarlatina being the most important which developed here during the month of December, resulting in about fifty cases in mild form, very few developing grave symptoms and no deaths resulting from the disease.

Typhoid fever is almost unknown in our portion of the State. During an extensive practice of more than twelve years in this locality I have treated only two genuine cases of this fever, one of which was imported from Texas and the other from the State of Ohio.

Few cases of sunstroke or meningitis have ever occurred, which is perhaps due to the humid and very temperate atmospheric conditions.

I append table giving number of deaths from all causes.

Congestion of brain	1
Congestion of lungs	3
Congestion of stomach and bowels	6
Consumption	1
Accident	1
Pneumonia	8
Typhoidal fever	5
Dysentery	1
Gastritis	2
Unknown	7

This is a death rate of 17 1-2 per 1,000, fourteen being white and twenty-one colored. The mortality of the colored population was alarming, when we note the fact that only one-third of the 2,000 were colored. Here is another instance of a lack of efficient State laws to regulate the practice of medicine and protect her citizens against quackery, charlatanry and empiricism. We have had for more than a year located in our midst an Indian medicine man, accompanied with negro minstrels and a band of music exhibiting from a gorgeous chariot on our streets, pretending to advertise and sell medicine. In hundreds of instances, however, a pretended examination is made and medicine (Indian of course) given in flagrant violation of our laws. Numbers of ignorant colored people have been known to stand out in the streets during the most inclement weather to witness the vulgar tirades of this emissary, fill their pockets with nostrums and systems full of cold from exposure, go home perhaps at a late hour of night in rain, sleet or snow, take beds of sickness and gulp down these worse than humbugs and die without once consulting a physician. Many have thus died right in the midst of intelligent, competent physicians without aid or an attempt at scientific treatment.

This Indian, who poses as "Dr. Spotted Wolf," has several times been arraigned in our civil courts, but by the assistance of able legal counsel has evaded punishment and still continues his nefarious business to shameful cost of human lives among the ignorant of this community.

Are we, as a people of a proud and dignified commonwealth, compelled to submit for all time to such degradation—or we might say murder—fostered and protected by weak legislation?

Arkansas County is a near neighbor to Lee. Dr. W. H. Moorehead writes as follows:

Eighteen hundred and ninety-five was unusually sickly, especially during the autumn months. Malarial fevers, biliousness and pernicious types of malarial fevers prevailed more than usual. Why, I do not know, unless it was because there was a great deal of new land opened up, and there having been

no overflow vegetation made quite a growth in the low lands, something unusual. Measles prevailed during the entire year.

I have arranged the accompanying mortality report. The estimated population of our county is 15,000, one-sixth to one-fourth negroes.

Table No. 3 is a list of deaths, classified according to age, color and sex.

TABLE No. 3.—Partial List of Deaths Occurring in Arkansas County During the Year 1895.

	Totals.	Age.															
		Under 1 Year.				One to 5 Years.				Five to 60 Years.				Over 60 Years.			
		White.		Black.		White.		Black.		White.		Black.		White.		Black.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
January	8	None.		*	*	None.				1	4			1	1		
February	2										1				1		
March	7						1			2	3	1					
April	10		2				1	1		2	3						1
May	5					1				3			1				
June	5		1			1		1			1				1		
July	9					4	4	1									
August	19				2	2	4			3	7						1
September	29		1			2	2		1	8	11	1	2				1
October	25		2				2	1		10	7	1		2			
November	16									10	2			3	1		
December	20		1			2				6	3		1	2	5		
Deaths not dated	13		1			3	1			4	1			3			
Total	168		8	1	2	15	15	4	1	49	43	3	4	11	9		3

*One, age and sex unknown.

Table No. 4 is arranged to show deaths due to specified diseases each month.

TABLE No. 4.—Mortality Table, Arkansas County, Ark.

Month.	Pneumonia.	Cerebro Spinal Meningitis.	Cerebritis.	Malarial Hæmaturia.	Malarial Fever.	Albuminuria.	Unknown.	Puerperal Septicæmia.	Tachycardia.	Phthisis Pulmon.	Pernicious Mal. Fever.	Capillary Bronchitis.	Hem. Adherent Placenta.	Pulmon. Abscess.	Hæmatemesis.	Mem. Laryngitis.	Morbus Brightii.	Diarrhœa.	Dysentery.	Congestive Chill.	Pulmon. Conges.	Heart Disease.	Typhoid Mal. Fever.	Rheumatism.	Uræmia.	Remitent Fever.	Erysipelas.	Eczema.	Meningitis.	Peritonitis.	Cerebral Congest.	Dropsy.	Typhoid Fever.	Gastritis.	Septicæmia.	Jaundice.	Metritis.	Dentition and Malnutrition.	Inanition.	Gastro Enteritis.	Hepatitis.	Paralysis.	Measles	Cong. Stom. and Bowels.	Concussion Brain.	Alcoholism.	Peritonitis.	Catarrhal Fever	Chorea.	Con estion.	Cholera Infantum.	Total.
January	2	1	1	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
February	...	...	...	1	1	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
March	1	...	...	...	...	...	...	...	...	1	2	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
April	2	...	...	...	...	...	2	...	...	2	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
May	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
June	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
July	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
August	...	...	...	1	...	1	...	...	...	...	2	...	...	...	...	...	1	...	2	4	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
September	...	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	2	3	...	2	2	1	2	1	...	...	...	...	...	2	1	3	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	29
October	...	...	...	...	7	...	1	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	25
November	2	1	...	...	3	...	...	...	...	...	...	2	...	...	...	2	...	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	7	1	...	...	...	...	...	...	16
December	3	...	...	...	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	...	...	20
Not Dated	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	13
Total	14	3	1	3	17	12	1	7	1	1	5	15	3	1	2	1	2	4	7	9	1	4	3	1	2	3	2	1	1	1	2	5	4	2	1	1	1	2	1	1	1	8	2	1	2	1	1	1	1	1	168

Population, 15,000; white, 12,000; colored, 3,000. Annual mortality rate, 11.2 per 1,000.

In contrast to this is the report for Baxter County, a mountainous region. Dr. J. B. Simpson presents the following record of deaths occurring in the practice of the five regular physicians of Baxter County during the year 1895.

TABLE No. 5.—Mortality Record, Baxter County, 1895.

	Sex.		Age.					Total.
	Male.	Female.	Over 60.	21-60.	5-21.	1-5.	To 1.	
Typhoid fever	5	4	.....	5	4	.....	.....	9
Gastro enteritis	1	1	.....	.....	.....	1	1	2
Heart disease (organic)	.....	1	.....	1	.....	.....	.....	1
Rachitis	1	.....	.....	.....	1	.....	.....	1
Chronic malaria	.....	1	.....	.....	1	.....	.....	1
Tuberculosis	.....	1	1	.....	.....	.....	.....	1
Hæmatemesis	.....	1	.....	.....	1	.....	.....	1
Dysentery	.....	1	.....	.....	.....	.....	1	1
Total	7	10	1	6	7	1	2	17

Writing regarding this table, Dr. Simpson says:

This table includes largely the majority of the practice of the county, yet there is fully as many nongraduates practicing in Baxter County, but their practice is not extensive. I have not applied to them for statistics, knowing full well they would be unreliable if obtained at all.

You will understand from the death report that there has been but little sickness in Baxter County, except typhoid fever. This disease has prevailed quite extensively throughout this section of the country for the past three or four years. The death rate was somewhat greater in 1895 than in any previous year. The cause of typhoid fever in this section of the country, in my opinion, is contaminated water. In our town the people have "open" wells and cisterns, and they have been made without any regard to their close proximity to the privy vaults. I find in the country nearly all the dwelling houses are built above the spring, in fact, in every instance where I have found typhoid fever I have found this state of sanitary surroundings. This is a mountainous country, and as soon as the people arouse to the necessity of attention to their water supply, typhoid fever will be driven out of the country, and then there will be no healthier

place in America than Baxter County, Arkansas. I have been practicing medicine in the county for twenty-two years. During all this time we have had no epidemics of any kind, save an occasional short visit of measles, mumps or whooping cough. Our county society is in a flourishing condition, with a membership of five.

Dr. Ruff, of Pope County, writes as follows:

There are no special diseases prevailing in our section. Health is very good.

During the months of December, 1895, and January, 1896, we had some pneumonia and catarrhal fever of mild form, which yielded readily to treatment.

During the hot months of July, August and September, 1895, we had some malarial fever and chills in the bottoms or lowlands.

Had some typhoid fever in the hill country or uplands.

While we had an abundance of fruits and berries last year, we were almost entirely exempt from bowel troubles.

We were entirely exempt from that dread disease, dysentery.

Haven't had any measles, mumps or whooping cough during the past year.

The death rate has been very small.

Dr. Whitmore reports for the north half of Howard County as follows: Total deaths, 34; white, 32; colored, 2.

TABLE No. 6.

Deaths in Howard County for the year 1895.

Month.	Disease.	Age.	Sex.	Color.
February	Blood poison	4 years	Male	White.
February	Old age	80 years	Male	White.
February	La grippe	70 years	Male	White.
February	Unknown	15 years	Female	White.
March	Unknown	20 years	Female	White.
March	Concussion of brain	3 years	Female	White.
May	Spinal meningitis	1 month	Male	White.
May	Puerperal peritonitis	26 years	Female	White.
June	Cholera infantum	17 months	Female	White.
July	Cholera morbus	50 years	Female	White.
August	Remittent fever	6 years	Male	White.
August	Labor	37 years	Female	White.
September	Unknown	15 years	Female	Colored.
September	Pernicious malaria	17 years	Female	White.
September	Paralysis	65 years	Female	White.
September	Sclerosis liver	76 years	Male	White.
October	Cholera infantum	1 year	Female	White.
October	Phthisis	57 years	Male	White.
October	Paralysis	97 years	Female	White.
October	Chronic dysentery	10 months	Female	White.
October	Pernicious fever	3 years	Female	White.
November	Typhoid fever	18 years	Female	White.
November	Remittent fever	8 weeks	Female	White.
November	Puerperal peritonitis	27 years	Female	White.
November	Typhoid fever	18 years	Female	White.
November	Puerperal peritonitis	25 years	Female	White.
November	Pernicious fever	2 years	Female	White.
November	Pernicious fever	5 years	Male	White.
November	Malarial fever	19 years	Female	White.
December	Pneumonia	52 years	Male	White.
December	Eclampsia puerperal	25 years	Female	White.
December	Pneumonia	8 months	Female	Colored.
December	Typhoid fever	77 years	Male	White.
December	Slow fever	9 years	Male	White.

Dr. W. N. Warren, of Buckner, writes of Columbia County in this way:

In making out my report will commence from May, 1895. In May and June a mild type of remittent fever prevailed. In July and August an epidemic of flux (bloody). In September and October we had more chills than usual, but none of a pernicious character. We also had some typho-malarial fever, and a few cases of malarial haematuria. During winter few cases of pneumonia. Since January, 1896, an epidemic of measles has been with us. I have not heard of a still born child in this community for over twelve months.

Below I will give number of deaths and specific causes:

Specific Cause.	White.	Black.	Male.	Female.	Age.	Totals.
Consumption	1		1		45	2
Consumption	1			1	40	
Dysentery		1	1		1	2
Dysentery		1	1		1	
Malarial Hæmaturia	1		1		21	2
Malarial Hæmaturia	1			1	19	
Measles	1		1		75	3
Measles	1			1	40	
Measles	1		1		1	

This county is very healthy, therefore my report will be short.

In the second tier of counties from the Southern border of the State is Nevada, a near neighbor to Columbia County, Dr. Armistead, of Prescott, sends the following:

Complying so far as possible with the request for a report to be engrafted in that of the Committee on State Medicine, I have to express my regret that I have little to send.

Last year had some unusual features, such as higher thermal condition and greater rainfall. Otherwise, the condition of public health or amount of sickness as compared with the year before, attracts no particular attention. We had no remarkable epidemic, except the so-called la grippe, which has no special season here for its prevalence. It was marked by no unusual severity. The sexton of De Ann Cemetery has kindly furnished me number of interments, white 10, colored 6, total 16, for 1895. Of these three were due to tuberculosis, one to pneumonia, two to slow fever, one to cirrhosis, one to senility, others unknown.

Prescott has a population of 2,000 within its corporate limits. A circle around the town 4 to 5 miles radius has a population of nearly double that of the town. This area takes in several country churchyards of which no record can be obtained. We had more than the usual number of interments last season at De Ann Cemetery. One year, 1892 or 1893, there were but four, whites, two of which were brought from elsewhere. So much for mortuary statistics.

The water supply is from wells and cisterns. The former are bored. Water is reached in the town of Prescott and the surrounding prairies, about 30,000 acres, at the depth of 180 feet average. In many places the water flows out at the top, true artesian wells. If not curbed with galvanized iron tubing surface water finds its way into the wells that do not flow and carries with it organic matter, detrimental to health. When protected against seepage the deep well water is considered healthy. The soil in and several miles around Prescott is black and stiff. Beyond this the land is sandy and covered with pine forests. In the sandy lands good water is reached at 18 to 20 feet. I endeavored to obtain data as to rainfall, etc., but failed.

Dr. Huddleston makes the report for Johnson County:

Johnson County is bounded on the south by the Arkansas River and on the north by the Boston or Ozark Mountains. The intervening sections are more or less undulating. We obtain our drinking water almost exclusively from wells, which range from 25 to 60 feet in depth. The prevailing diseases here are malarial in the summer and fall, pneumonia and catarrhal affections during the winter and spring. We had an epidemic of pneumonia during January and February that extended into March. The disease was of unusual severity, accompanied by many complications. My notebook shows thirty-five cases, ranging from 2 to 70 years of age. No deaths. Treatment, mercurial purge at beginning of attack, Ergot and Digitalis and Dover's Powder. Malarial troubles were treated with the remedies usually prescribed in such cases. We had an epidemic of scarlatina with severe sequelas in some cases. The diagnosis being uncertain until such sequelae as albuminuria, etc., revealed the true nature of the trouble. No deaths reported. We had our usual epidemic of la grippe during the winter. Most cases were of shorter duration and milder than in previous epidemics. Slow fever, as it is usually called here, is almost a thing of the past, having gradually subsided with the removal of numerous sawmills and planers that

produced large quantities of decaying vegetable matter. At present, March 25, 1896, we have an epidemic of mumps of mild form. We have had many cases of obstinate, infectious marginal blepharitis.

Dr. Z. J. Lantorn, Dallas County, writes thus:

The health of Dalark has never been better. It is starvationally healthy. Captain Higgins, Superintendent of the U. T. A. & M. R. R., passing through Dalark, says the town has everything one might call for except a graveyard. Therefore I have not much to report.

There has been a light epidemic of la grippe, confined principally to the upper respiratory tract. No deaths. I know of one case of capillary bronchitis in a 3-year-old colored child. One died of phthisis pulmonalis, hereditary, a young lady of 25 years of age. One death from organic heart disease, a male, 55 years old. Inflammation of brain, one death, male, 54 years old. Two deaths from typhoid fever, both males, 40 and 65 years of age. Intermittent and remittent fevers have been more prevalent this year than last; typhoid less. One death from wasting disease of childhood and pertussis; one from congestion of brain and pertussis. There have been no deaths from pneumonia or inflammation of stomach and bowels. Several cases of carbuncle have occurred. They yielded to antiseptic treatment. On the whole the year 1895 has been the healthiest I have experienced in a practice of twenty-six years.

The report for Polk County is made by Dr. Sutherland, of Cove, as follows:

During the year 1895 nothing unusual occurred in Polk County until the 1st of September, then there was quite a malarial visitation that lasted about thirty days. It was rather mild in form.

The following table will, in a measure, illustrate the mortality of our county during the past year. It will be impossible to tabulate by months:

Phthisis pulmonalis, number, 6; ages, 40, 45, 64, 55, 30, 20; all white, 2 males, 4 females; pneumonia, number, 9; ages,

35, 12, 30, 55, 17, 11, 18, 26, 40, all white, 6 males, 3 females; typhoid fever, number, 6; ages, 13, 14, 21, 23, 20, 45, all white, 4 males, 3 females; cholera infantum, number, 3; ages, 4 months, 11 months, 12 months, white; cerebro-spinal meningitis, number, 3; ages, 1, 12, 35 years, 2 males, 1 female; puerperal fever, ages, 30, 32, white, number, 2; diabetes mellitus, ages, 55, 74, white males, number, 2; malarial fever, number, 3; ages, 65, 56, 45, male 1, female 2, white; membranous croup, number, 2; ages, 1 year, 7 months, females, white; inflammation stomach, 1 female, age 28; inflammatory diarrhoea, number, 9; sex unknown, ages, 1, 2 years, all white; gunshot wounds, number, 2; ages 19, 38, white, males; causes unknown, sex and age unknown, number, 12; making a total of 60. Population, 9,283; rate, 6.5 per thousand.

There have been no epidemics in our county for several years. Sickness is usually very mild in form here. One doctor of this county visited 300 patients during the year. There were but three deaths. I believe that malarial fevers are more numerous than any other form of disease.

Dr. A. B. Loving, of Camden, is the member of the committee for Ouachita County. He gives the death rate of Camden as about five per thousand of the population, for the year 1895. The report is as follows:

I find by reference to the city recorder's book that twenty burial certificates were issued during the year 1895, and of this number ten were white and ten colored. This includes some persons who died in the adjacent country.

I do not think we would miss it but little when we say that the twenty deaths were about equally divided between children and adults. As to the cause of death, I can only speak in part.

Two died of phthisis pulmonalis; one from pneumonia. Several children died from ilio-colitis, and one child and one adult died of a continued form of fever, commonly denominated slow fever. There were no deaths from heart disease or meningitis. One child died of diphtheria. One adult died of

malarial haematuria—this case died in the bottom beyond the river.

I have about gone through with the more common diseases of this section of country, with the exception of rheumatism and dysentery. The latter disease prevailed to a considerable extent during last fall and summer, but in most cases was easily controlled.

Malaria in its different types was more malignant last summer than for several years, due, no doubt, to the superabundance of decomposing vegetable matter, which always follows a rainy season, such as we had the past year.

Parotitis and rubeola are now prevailing throughout this section of country. Beyond this we have been free from epidemics since our last report on State medicine.

Camden is situated on the south side of the Ouachita River, and is a city set on many hills and necessarily has good drainage, and consequently is a healthy location.

The population is between 3,000 and 4,000, and about one-third are negroes. I will say, also, that there is a sewerage system here which includes the business portion of the city only.

The water supply is from the river and is considered fine.

Good drainage, good water and proper sanitation make good health.

The report for Prairie County is made by Dr. J. R. Lynn, of Des Arc, as follows:

During the year now about closing, so far as diseases are concerned, Prairie County has had her share, but there has been nothing in the character of the sickness to excite alarm, nor has there been an unusual amount.

During the months of January and February, 1896, an epidemic of smallpox prevailed near Surrounded Hill, this county. The outbreak was confined entirely to the negro fraternity—tenants on the plantation of Mr. G. W. Nail. There was a total of sixteen cases, with five deaths up to March 8, 1896.

A widespread epidemic was prevented by isolation and compulsory vaccination. Credit is due to Mr. Nail for aiding

county and State health officials to stamp out the prevailing epidemic.

HEALTH OF DES ARC.

I feel quite confident in saying that at no time during the past decade has there been so little sickness in our town.

This assertion is not based simply on personal observation, but is the result of information gathered from various sources, the chief of which is reports given me by quite a number of active practitioners.

In looking for the causes which have wrought this highly satisfactory condition of health, our attention is attracted to two prominent ones, either of which is worthy of mention. The first of these is the grading of the streets, giving us a free surface drainage. Another factor in this improvement is the inspection service inaugurated in the spring of 1893. The inspectors were, a majority of them, graduates in medicine and hence qualified for the important work expected of them. A thorough inspection of the entire premises of every household in the town was required of them. An effort was made to educate our people up to a higher appreciation of the importance of sanitation as applied to their homes. Where argument failed to produce the desired effect, every one failing to comply with the order of the inspector was cited before the mayor and promptly fined.

Malaria in its multifarious forms comprises a large percentage of the illnesses of this section during the summer months, and it is a well demonstrated fact that malarial poison needs for its development not only a high temperature, but a prolonged high temperature. Hence I must ascribe some of our good fortune to barometric and thermometric conditions.

TABLE No. 7.

Mortuary Report Within Des Arc and Within a Radius of Five Miles Adjoining, as per Board of Health Record.

Cause.	White.	Black.	Male.	Female.	Adults.	Children.
Phthisis pulmonalis	2	4	2	4	4	2
Bronchitis						
Pneumonia	2	3	2	3	1	4
Org. heart disease	1			1	1	
Inflam. stomach and bowels	3	5	3	5	2	6
Dysentery	1		1		1	
Inflam. brain and cord and their membranes	1		1			1
Intermittent, remittent and continued malarial fevers						
Pernicious form mal. fever, hæmaturia	1			1	1	
Typhoid fever	1		1		1	
All other causes	1	3	2	2	3	1
Total	13	15	12	16	14	14

Population of territory as above: White, 1,800; black, 700; total, 2,500.

Death rate per 1,000 per annum { White 7; Black 20; Total 13.5

Dr. R. B. Christian presents the following report for Pulaski County:

As a member of the committee on State medicine of the Arkansas Medical Society, from Pulaski County, I beg leave to submit the following report:

The law in Pulaski County provides for a county physician and the maintenance of a county hospital and poor house. The physician is required to attend the sick of the county at the hospital and jail and look after the sanitation of these institutions. The insane also of the county, either at the hospital or jail, are under his charge. The erection of a building to serve as hospital and poor house for the county was begun in 1889, and was occupied as such in 1892. It is situated on a tract of 40 acres of land lying in the southwestern suburbs of the city of Little Rock, and is surrounded by a beautiful grove of pine and oak. The drainage immediately around the hospital is very good, and I suppose all that could be urged against the healthfulness of the location is its proximity to Fourche Creek valley, by which Little Rock is bounded on the south. The building is a large and commodious structure of brick and of modern style of architecture, amply supplied with water closets and bathing facilities,

heated by steam and lighted by gas. An additional building, and in close proximity to the main building, has been erected within the past two years especially for the insane patients. The hospital is well equipped in all departments for taking care of the indigent sick of the county, the appropriations for this purpose and for the continual support of the institution having been quite liberal. It does credit to the county and to the State, and from it a large and needy class of people derive great benefit. The following brief report for 1895 indicates the capacity of the hospital and the extent of the charity it affords:

Number of beds	100
Total number of patients admitted	1,033
Daily average of patients during the year	64
Number of deaths	63

The municipal government of Little Rock provides for a city physician, whose duty it is to attend the sick poor whenever he is called upon to do so, and he is required to make monthly reports to the city council of the amount of work done. He is ex-officio secretary of the city board of health, which is composed in addition to himself, of the mayor and three members of the council. By ordinance the city requires death and birth certificates from the attending physician, and a fine of not less than $5 and not more than $25 is imposed in case of failure to comply therewith. The law with reference to death certificates is strictly complied with, but with reference to birth certificates it is not, and no effort is made to enforce it. Little Rock has never had a city hospital, and has had to rely on the county hospital almost entirely for means of taking care of her indigent sick. Thanks, however, to the philanthropic bequest of the late Logan H. Roots, the city has received from his estate the sum of $10,000 with which a city hospital will very soon be erected and equipped.

The Little Rock Infirmary, a private hospital under the control of the Catholic Church and direct management of the Sisters of Charity, is a most creditable institution, and while not altogether a free charity, its doors are open, when room will admit, to

the sick of the city who are unable to pay for board and attendance. It is complete in all its appointments, and as a place where the sick of any class can be well taken care of, it will compare favorably with institutions of a similar character anywhere. The Infirmary's capacity is thirty beds. During the year 1895 two hundred and ten (210) patients were received, one hundred and seven (107) of which number were charity patients. There occurred during the year ten deaths.

The health of Pulaski County for the year 1895 has been good. There has been no epidemic anywhere in the county and there has been no prevailing types of disease. The diseases occurring have been of the usual variety and attended by no unusual amount of mortality.

With some difficulty and very tedious labor I have been able to construct the accompanying mortality report of the city of Little Rock for 1895. I do not know, but suppose, that the same lack of law and remissness in the enforcement of law with reference to the vital statistics which exists in the county of Pulaski and city of Little Rock also prevails in the other counties and cities of the State.

It is a deplorable fact that while the machinery of county and city government is complete and amply sufficient to attend promptly and systematically to all matters pertaining to the general welfare, yet the compiling and keeping on record of complete tabulated reports on vital statistics is a thing almost entirely neglected. The city of Little Rock is wholly without statistics of this character, and it is impossible to obtain from an official source any satisfactory information in such direction. The reputation which Arkansas bears abroad as being a very unhealthy country, and where the mortality rate runs very high, must go unimpeached, simply because, for the lack of vital statistics in the State, there is no source from which evidence to the contrary can be produced. I believe the rate of mortality in Arkansas will compare very favorably with that of other States of similar climate, and where the character of population and other conditions are the same, and even with some of those States

occupying a higher latitude. But we, as an intelligent, progressive people, who wish to keep abreast of the times in building up the State, in developing its unlimited resources, are very derelict of duty to ourselves and posterity and to the country at large when in our governmental capacity we fail to have kept in every county and city clerk's office of the State complete records and reports on vital statistics.

Carefully compiled and tabulated mortality reports should be made annually and kept on file in every county and city clerk's office in the State. The county and city physician, together with the county and city clerks, should be held to a strict performance of this duty. Then and not till then will we be in position to show to our friends abroad from an authentic source what the true death rate of Arkansas is, and how the health of one portion of the State compares with that of another, and thus give to the immigrant, the capitalist and others wishing to live or make investments within her borders, valuable and trustworthy information. Nor is the medical profession of the State without responsibility in this matter. Medical men should feel it incumbent on themselves, not only as good citizens to consider the importance of such matters, but knowing as they do their full import and the manner in which vital statistics should be compiled and tabulated, to urge and assist by every means in their power the enactment and enforcement of law in this direction.

TABLE No. 8.—Mortality Report of Little Rock, Ark., for 1895.

| | Total Deaths per Month. | Sex and Color. | | | | Age. | | | | Causes of Death. | | | |

In reporting for our Border City I will have but little to say as to her delightful location, mild clime and general salubrity. I have gathered statistics from the city clerk's office, where accurate mortuary records are kept, and tabulated them. The deaths occurring during 1895, have been classified according to age, sex, color, by the month (Table No. 9). Also have I tabulated them according to the nature of the diseases causing them, (Table No. 10). There are certain affections of more consequence than others. I have arranged the deaths due to these diseases according to age, sex and color (Table No. 11). Still births have been excluded from these records. The general rate of mortality has been fourteen per thousand of the population, which is about 14,000, one-fourth colored. The rate per thousand of the white population is 13.3, of the colored 16. The difference in the rates of mortality is less in 1895 than usual. In 1894 the white rate was but 8,· while the colored was 14 per thousand. The general rate for 1895 was greater than for 1894 or 1893, which were respectively, 11.5 and 12.7. This increased rate may be accounted for by the unusually heavy rainfall of 1895. In June, July and August 26.61 inches fell, while during the same period in 1894, 6.51 inches; 1893, 11.17 inches; 1892, 7.8 inches. Vegetation was consequently unusually luxuriant. This large quantity of organic matter ultimately decaying, served, no doubt, as a good soil for malarial poison. The maximum temperature, 97 degrees, was noted in September. The greatest number of deaths occurred in October, the month following. In September the deaths were half again as numerous as in August or July. The maximum temperature is higher than 97 degrees generally. It was in 1894, 105 degrees in July; 1893, 101 degrees in September; 1892, 100 degrees in August. It may be assumed that had the temperature in September, 1895, reached as high a degree as usual the mortality would have been proportionately greater. Fortunately, Fort Smith, being situated upon a relatively high, well drained site, with no morasses in the immediate vicinity, her streets being

fairly clean and the sewer system throughout the city good, the evil effects to be expected from a long summer, marked by heavy and continuous rainfall and correspondingly rank growth of vegetable matter and a hot season in the fall, were not as noticeable as in towns less favored by nature and guarded less carefully by the sanitary board.

TABLE No. 9.

1895.	Female.	Male.	White.	Colored.	Over 15 years.	Children Under 15 Years.	Total.	Annual Rate per 1,000.	Annual Rate Whites.	Annual Rate Colored.
January	10	10	16	4	13	7	20	17	18.6	12.9
February	7	6	11	2	8	5	13	11	12.7	6.5
March	10	8	11	7	13	5	18	15.4	12.7	22.7
April	2	9	4	7	8	3	11	9.3	4.6	22.7
May	12	5	10	7	11	6	17	14.5	11.6	22.7
June	8	5	10	3	9	4	13	11	11.6	9.9
July	8	7	9	6	8	7	15	12.8	10.4	19
August	10	7	13	4	6	11	17	14.5	14.1	12.9
September	7	16	20	3	15	8	23	19.7	23.3	9.9
October	9	17	20	6	11	15	26	22.2	23.3	19
November	9	10	12	7	11	8	19	16	14	22.7
December	3	1	3	1	4	. .....	4	3.4	3.5	3.2
Total	95	101	139	57	117	79	196	14	13.5	16

White population, 10,400; colored population, 3,600; total population, 14,000.

TABLE No. 10.—Mortuary Table, Fort Smith, Ark., 1895.

| 1895. | Phthisis Pulm. | Miliary Tuber. | Tuber. Periton. | Laryng. Tuber. | Pneumonia. | Bronchitis. | Asthma. | Pleuritis. | Organic Heart Disease. | Heart Failure. | Gastritis. | Enteritis. | Dysentery. | Diarrhœa. | Cholera Infant. | Typhoid Fever. | Malarial Fever. | Intermittent. | Remittent. | Pernicious Fever. | Malarial Complications. | Tumor of Brain. | Cerebral Meningitis. | Cerebral Hernia. | Convulsions. | Trismus Nascen. | Paralysis. | Cerebral Conges. | Rheumatism. | Blood Poison. | Hepatic Abscess. | Trismus. | Post Pharyng. Abscess. | Scarlatina. | Diphtheria. | Croup. | La Grippe. | Tracheitis. | Senility. | Hemorrhage. | Chronic Interstitial Nephrid. | Malignant Jaundice. | Umbilical Gangrene. | Trauma Shock. | Congestion. | Hydrophobia. | Cancer Stomach | Cancer Bowels. | Cancer. | Rachitis. | Natural and Unknown. | Pernicious Anæmia. | Uræmia. | Puerperal Septicæmia. | Spinal Disease. | Alcoholism. | Dropsy. | Peritonitis. | Malnutrition. | Inanition. | Cancer Liver. | Diabetes Mel. | Hepatitis. | Marasmus. | Cancer Uterus. | Abdominal Tumor. | Abdominal Lesions. | Hydrops Pericard. | Abscess. | Total. |
|---|---|---

TABLE No. 11.

1895.	Female.	Male.	White.	Colored.	Over 15 Years.	Under 15 Years.	Total.
Phthisis pulm.	10	10	14	6	19	1	20
Pneumonia	7	5	12	.....	8	4	12
Bronchitis	1	2	3	.....	2	1	3
Typhoid fever	2	.....	1	1	1	1	2
Malarial fever	1	4	4	1	3	2	5
Intermittent fever	2	1	.....	3	1	2	3
Remittent fever	3	1	2	2	1	3	4
Congestive and pernicious fever	1	.....	1	.....	.....	1	1
Enteritis	6	13	18	1	3	16	19
Gastritis	1	.....	1	.....	1	.....	1
Dysentery	2	.....	1	1	1	1	2
Cholera infantum	2	1	2	1	.....	3	3
Cer. meningitis	4	2	1	5	.....	6	6

Per cent total deaths due phthisis pulm., 10.2; per cent white deaths due phthisis pulm., 10; per cent colored deaths due phthisis pulm., 10.5.

I am borne out by our best physicians in the belief that in 1895 sickness of malarial type was far in excess of almost any year since 1888. This is in accord with the observations expressed in reports from other sections of the State already presented.

It is generally assumed that whites are more susceptible to this class of disease than the colored. By the table No. 9 it is to be seen that the colored race furnished more than their full pro rata of deaths due to malarial affections. Out of a total of thirteen of such deaths the colored people gave six, about half, while they are about one-fourth of the total population. It is remarkable that such a relatively large number of colored people died of meningitis—five-sixths of the total deaths ascribed to this disease—about 1.4 to the thousand colored population, while among the whites the rate was .1 per thousand. It is to be seen that as regards enteric diseases the white suffered more than the colored people. Strange to say all deaths from pneumonia occurred among the whites, though the colored race is regarded as very susceptible to this affection.

It appears that typhoid fever occurs but seldom in a fatal form at Fort Smith. Dr. Robinson has already in this report called attention to the fact that typhoid fever has been very

rare in the vicinity of Marianna. These observations are in marked contrast to the reports received from mountainous parts of the State, especially that of Dr. Simpson, Baxter County, in which nine out of seventeen deaths have been ascribed to typhoid fever. I have frequently heard that typhoid fever prevails to an alarming extent at Eureka Springs and Fayetteville. The cause of this disease is local. A word to the wise is sufficient.

The table also makes apparent the fact that deaths from phthisis pulmonalis are relatively few. There were twenty during the year, 1.4 per thousand population, or 10.2 per cent of total deaths. The white population show a death rate due to this cause 1.3 per thousand and 10 per cent of total deaths, while the colored population show a rate of 1.7 per thousand and 10.5 per cent of total deaths.

Mild epidemics of measles, pertussis, varicella, mumps, scarlatina (three deaths), liphthesis (two deaths) have prevailed. Two deaths were ascribed to membranous croup. Smallpox was brought into Fort Smith by a citizen who had been engaged in work for the Kansas City, Pittsburg and Gulf Railroad in the Indian Territory, and a stranger who also worked for that road. The two cases were promptly isolated and earnest efforts made to prevent spreading of the disease. Up to this date, April 30, there have been no new cases. The second case is well.

We may judge from the data furnished by this report that consumption is far less fatal than in the North and East, that typhoid fever is not epidemic and does not prevail with the same virulence as at Denver, Chicago or Philadelphia, for instance; that the rate of mortality of the colored people is greater than that of the whites and that the general rate is not greater than in other regions reputed more healthful than Arkansas, but less.

Thus your committee has struggled to answer the queries propounded at the beginning of the report. We have been handicapped by the lack of authentic data. On this account the members of the committee contributing to this report have

had much unnecessary labor. If mortality records were accurately kept in every town where there is a recording officer and yearly returns were made to the State board of health, compiled and published, much could be done towards removing the bad name Arkansas now suffers from as being unhealthful—a reputation that has deterred many a man from locating within her borders. Such work would repay in a few years the expense incidental to it a thousand fold. The national government can furnish climatological data from all parts of the State. The work of collecting vital statistics recently inaugurated by the Department of Agriculture is of great value to us. Such reports furnish us the means of comparing our mortality and morbidity statistics with those of many towns and cities from every section of the Union. At this time, when Arkansas is giving promise of great strides in advancement in agriculture, commerce and manufacture, it seems a propitious time for the medical profession to join in and do its duty in promoting public welfare by a thorough canvass of mortuary records and publishing the facts as they are. Let the committee on legislation draft a law requiring registration of births and deaths throughout the State, with city or township officials. Then your committee on State medicine would have something authoritative to draw from. Respectfully,

E. G. EPLER, M. D., Chairman.

Miscellany.

Professor Pancoast Dead.

Professor Wm. H. Pancoast, the distinguished physician and surgeon, died at Philadelphia, Pa., January 4, aged 64 years. Professor Pancoast, after obtaining his degree, traveled extensively in Europe and studied in the leading colleges of London, Paris and Vienna. He was elected as president of the Medico Chirurgical College in Philadelphia in 1887 and held the position at the time of his death.

A Large Dose of Arsenic.

One of the Peoria druggists is wondering what they use in some of the so-called physician's short road-to-wealth-and-do-the-druggist, namely, the highly multifarious tablet triturate. Not long ago he had a prescription to fill calling for two dozen one-thirtieth grain arsenious acid tablets. The next morning his customer came in and inquired if there was anything harmful about those tablets, stating that his 2-year-old baby had swallowed twenty-three of them the night before. That makes twenty-three-thirtieth grains of arsenious acid for a dose. May be our dispensatories are not accurately informed about arsenic when manufactured into tablet triturates. Probably arsenic decreases in dynamical, or dam-nyical power when prepared as tablet triturate, the same as our homoepathic friends' preparations increase, when a sunbeam is triturated by its sixteen minute journey to the earth, producing enough friction during its journey, so that it becomes attenuated, and by its provings, produces a cloudy appearance in the patient. Wonderful nineteenth century, solve!

Typhoid Baccillus.

It has been observed that if the serum of an animal immunised against the typhoid bacillus be added to a broth-culture of the typhoid bacillus, a remarkable reaction occurs, the bacilli become motionless and aggregate together into clumps, and it has been found that the blood serum of a typhoid patient acts in a similar manner. The method of diagnosis proposed by Widal is to withdraw a drop or two of blood from the patient, and mix with a few drops of a typhoid culture and examine microscopically. If the reaction mentioned above occurs the case is one of typhoid fever. The blood may be dried on a cover glass and examined at leisure if necessary. The reaction does not occur in other diseases and was not met with in persons who had had typhoid from one to fourteen years previously.

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Gentlemen—You will be solicited by the officers of the various sections to prepare and read papers at our next annual meeting, to be held in Little Rock, May 11, 12 and 13. It is to be hoped that there will be a prompt and generous response on your part. The hearty co-operation of every member of the association will be necessary in order that we may have not only in attendance, but in the number of papers, the most interesting and successful meeting ever held in the State. Reduced rates will be obtained upon all the railroads, and the Pulaski County Medical Society will spare no effort to render the meeting pleasant and profitable. Send the title of your paper at once to the Secretary.

Fraternally,

Secretary Arkansas Medical Society.

CONTENTS.

MEDICAL SOCIETY PAPERS.

Vesico-Vaginal Fistula—Report of a Case. By J. A. Dibrell, Jr., M. D., Little Rock, Ark. 145

Pelvic Suppuration—With Report of Cases. By Dr. J. P. Runyan. 150

EDITORIAL.

The May Meeting 155

The Osteopathic Fad 156

In Memoriam 156

THE ARKANSAS MEDICAL SOCIETY.

Officers of the Society, 1896-97 157

Standing Committees for 1896-97 157

COUNTY SOCIETIES.

Roster of County Societies 160

Report from Phillips County Medical Association 160

OBITUARY NOTICES.

Dr. James A. Dibrell 163

In Memory of Dr. J. A. Westerfield 166

Death of Sir Spencer Wells 167

BOOK NOTICES.

Swedish Movements, or Medical Gymnastics. By Dr. T. J. Hartelins, Stockholm, Sweden 168

Year Book of Treatment 168

Inebriety, Its Source, Prevention and Cure. By C. F. Palmer 169

SELECTED ARTICLES.

Pasteur's Remains Removed 162

Menstruation in the Eskimo 162

The World Moves 169

Report of a Case of Reinfection of Syphilis. By Howard Paxton Collings, B. S., M. D., Hot Springs 170

The Present Status of the Serum Treatment of Diphtheria. By William Cheatham, M. D. 171

Report of Two Successful Cases of Prostatectomy. By Lucius W. Hotchkiss, M. D. 178

Microbic Virulence 185

Asepsis in Country Practice. By Aug. Schachner, M. D., Ph. G., 189

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VOLUME VIII. APRIL, 1897. NUMBER 4.

Medical Society Papers.

Vesico-Vaginal Fistula—Report of a Case.

BY J. A. DIBRELL, JR., M. D., LITTLE ROCK, ARK.

It is now rather more than twenty-six years since I began the practice of medicine. A considerable proportion of my work has been in surgery, gynecology and obstetrics. For the purposes of this paper I may venture to say, I trust, without a suspicion of egotism on my part, that having enjoyed the confidence of many of my colleagues, I have been called upon to assist in very many cases of difficult labor, and from this fact have probably been engaged in more cases of dystocia than ordinarily falls to the lot of a general practitioner resident of a comparatively small city. Yet in all these years, with such experience and opportunities as they brought, I have met with but one case of vesico-vaginal fistula due to parturition. Neither in the clinics of my student days, nor in my wanderings around various hospitals in later years, have I seen a case of the kind, and in the transactions of this association from its organization to the present time I find none recorded. I have heard of one case in the State, which I believe was unsuccessfully operated upon, and this occurred years ago.

Certainly this accident to the parturient woman is happily becoming rare, and it is chiefly because of its now infrequent occurrence that the subjoined case is reported. Any one who examines the history of this subject must become satisfied that prior to the invention of the obstetric forceps the accident must have been of common occurrence. For whatever may be said of the abuse of this instrument, of the undoubted frequent damage done to the perineum by their use in careless or incompetent hands, their timely and judicious employment in proper cases, or of craniotomy or symphyseotomy, when considered best, according to the requirements of the case, will almost invariably prevent an accident, which formerly being practically incurable, entailed upon the unfortunate victim a life of wretchedness so extreme that perhaps there were few, if any of them, so afflicted, that would not have welcomed a release from their sufferings in death.

And though after the introduction of the forceps into obstetric practice cases of sloughing of the vesico-vaginal system was undoubtedly more seldom seen, yet down to 1852 sufferers from this affliction were probably to be found in every community. For until that date it was seldom that a case was cured by any process or procedure whatsoever. Every method that the ingenuity of surgeons of every age and date could devise appears to have been exhausted in vain attempts to solve the problem, How to cure a vesico-vaginal fistula. Only a case now and then appears to have been "relieved," or cured, the vast majority of them being doomed to hopeless lives of abject misery.

The record of Marion Sims' brilliant achievement is, or ought to be, too familiar to every member of this society to need repetition. But when we remember what he actually accomplished, recall his work, the difficulties of every description he encountered and overcome, and how much success, in this instance really merit, how far reaching and grand were the results, we feel that the entire civilized world, and especially womankind, owe him an eternal debt of gratitude.

Twenty years ago an honored member of this society said

that it was the duty of every woman on earth who could do so to contribute something toward the erection of a monument to Sims' name and fame that would stand until the end of time. How few there are of that sex of the present day that ever heard of Sims, and how prone we of the medical profession are to forget his services, and those of other great benefactors of the present time, or recent past!

Statistics clearly prove that this injury is due in nearly all instances to the prolonged pressure of the foetal head upon the bladder during the second stage of labor, which so impairs its vitality that sloughing ensues and the bladder is opened. Such pressure may continue for hours, even days, it appears, without such consequences. On the other hand, severe pressure through violent expulsive efforts of the uterus, of not more than half hour's duration, has been known to cause sloughing and a fistula.

It is in tedious cases of labor when unassisted nature is inadequate to accomplish delivery that instrumental interference is demanded, and when immediately following its termination, or at a variable time afterward, incontinence follows, those not fully informed even among physicians, but especially so with the friends or relatives of the patient, are disposed to attribute the unfortunate result to the use of instruments, rather than to prolonged and undue pressure of the foetal head.

In regard to this point, Dr. F. A. Emmet, the distinguished gynecologist, who has had a larger experience with vesico-vaginal fistula than any living surgeon, certainly more than any other on this side of the Atlantic, uses this emphatic language, and coming as it does from so high an authority, with his well known familiarity with the subject, should not be forgotten. Otherwise some skillful obstetrician is liable to be unjustly blamed for results for which he was in no way responsible, and perhaps have to defend an action at law for malpractice. He says: "I do not hesitate to state that I have never met with a case of vesico-vaginal fistula which, without a doubt, could be shown to have resulted from instrumental delivery. On the contrary, the entire weight of evidence is conclusive in proving that the injury is a consequence of delay in delivery."

It would seem that the victims of this terrible infirmity were chiefly among the poor, living perhaps, in many instances, in remote rural districts, where a long time must often intervene before the services of a physician could be had, or who were attended by midwives, untaught and untrained, and therefore unable to give aid to the lying-in woman.

A singular statement made by the late lamented Dr. Goodell, in one of his clinical lectures, seems to confirm this idea. He said that though he had operated a great number of times, all the money he ever received was $40, for two operations on the same woman, and that Dr. Emmet had informed him that for his first 150 cases he had been paid about $300, or an average of $2 for each case.

Mrs. W., of Franklin County, Ark., white, age 44 years, consulted me in May, 1895. I obtained this history:

She was married at 25 years. In her first confinement she was in labor three days, and the child was still-born. No instruments were used. With her next three children she had particular trouble. The children are all living.

On the 25th of February, 1889, she was in her fifth labor. She sent for her physician, having had pains, but for the most part not severe, for a week. The doctor delivered her with forceps at 12 o'clock the same night, of a dead child. Urine began to flow from the vagina at once, and has continued to do so ever since, not a drop having passed by the urethra for more than six years.

Her condition was now pitiable. The constant dribbling of urine kept her clothing saturated, and the parts over which it flowed irritated and inflamed. All her efforts at cleanliness could not relieve her of the ever present ammoniacal and urinous odor. She was much emaciated and dejected in spirits. Her life was one of wretchedness, of mental and physical distress. She had nearly abandoned hope of relief, and had lost interest in life.

Two unsuccessful operations had already been made to close the fistula, but at what dates or intervals I could not learn.

Because I could not guarantee a cure, and that in a single operation, she was determined to return to her home without having anything done. But after much persuasion on the part of her husband and friends she reluctantly consented to make one more attempt, and only one, to be relieved of her misery. She was sent to the Little Rock Infirmary. On digital examination I found a very large opening in the bladder. Indeed it appeared as though the entire base of the viscus was gone. Speculum examination showed the vivid red mucous membrane of the bladder inverted and protruding into the vagina. It formed a large tumor, bleeding at the slightest touch, entirely concealing the margins of the fistula as well as the cervix uteri. Pushing this mass upward with a wet sponge on a handle, the extent of the opening was revealed. It was very large, seemingly three inches or three and a half inches in transverse diameter and from two inches to two and a half inches in the antero-posterior. It was not exactly transverse to the axis of the vagina, but extended in a curve in front of the cervix backward and outward, giving the wound when finally approximated a curvilinear or horseshoe shape. The cervix was divested in front, and to a limited extent laterally of vaginal attachment. The cervix itself from prolonged maceration in urine, had become softened, eroded, vascular and from which there was an ugly, offensive discharge. The base of the urethra was well up behind the symphysis pubis. Fortunately there was but little cicatricial tissue, or phosphatic deposits, therefore not much preparatory treatment was required. On the 23d of May, with the assistance of several professional friends, I carefully pared the edges of this extensive fistula. The cervix forming the center of the posterior flap, its anterior surface being entirely deprived of vaginal tissue, this surface was also carefully freshened and received when the wound was co-optated that part of the anterior flap containing the base of the urethra. Eighteen silk worm gut sutures were employed, with here and there, as required, one of fine silk.

No retaining catheter was used, but instead the urine was

drawn off every three hours for the first few days, and then at longer intervals for another week.

On the 2d of June, ten days after the operation, the sutures were removed and we had the satisfaction of finding perfect union throughout the entire wound. There had been no leakage whatever during the process of healing. I was curious to know, in the absence of information, what would be the effect of the long functional inactivity of the muscles concerned in the expulsion and retention of urine. Beyond the fact that for some weeks, urine had to be voided more frequently than in a normal state of affairs, no disability in this direction occurred.

I have lately learned that this patient's restoration to health has been complete. I have never had a case I believe in which the outcome was more satisfactory to all parties concerned, in relieving this poor woman from an infirmity of the most distressing character that can befall one of her sex.

I feel it a pleasure to add my voice in praise of that grand American surgeon, through whose genius, skill and indomitable energy such results are possible even in the hands of tyros.

Pelvic Suppuration—With Report of Cases.

By Dr. J. P. RUNYAN.

Gentlemen of the Gynecological Section:

I feel, and I think we should all feel, a special pride in being enrolled among the number of those who bear the name of gynecologist. There is much in the very name that should justly evoke this feeling.

We are, gentlemen, the Knights Errant of the medical profession, bearing on our shields the colors and favors of the sex that represents all that is noblest, best and tenderest of humanity. Each one of us, gentlemen, is a modern Perseus, endeavoring, as best we may, to right the wrongs of such Andromedae as we may find chained to the barren rock of invalidism.

The sword, it is true, is evolutionized into the scalpel, and the monster of the fable—what of him! He, gentlemen, multiplied infinitely and numerically, has lost nothing of his potentiality for evil by becoming microscopical. We call him in this day and generation the gonococcus, but enough of fancy. Let us now to stern facts.

It is a fact impressed upon us strongly, by almost daily experience, that pelvic suppuration is a terrible and potent factor adding to the great sum total of female suffering. Whether it is on the increase or not, the fact stands that with the advance of knowledge more of us are able to diagnose these troubles. Certain it is, that in the last few years these cases seem to be more numerous.

As causative factors of pelvic suppuration, almost all authorities agree that they are twofold, viz: Gonorrhoea and septic infection during parturition or following abortion.

But these causes are, to a certain extent, under the control of the physician acting, advising and legislating wisely.

In the first place, as long as men with uncured gleety discharges get married, so long shall we continue to find innocent woman in the hands of the gynecologist for the treatment of this condition.

How frequently are we consulted by young men contemplating matrimony, who have been suffering for many months with chronic gonorrhoea, who tell us that they are especially anxious to be relieved at a date only a few weeks ahead, so that they may marry!

It is the duty of every physician so consulted to impress upon the man the untold horrors to which he is about to expose a pure and unsuspecting maiden; that an alliance with him in the near future would entail a certainty of untold suffering, and possibly a loss of life.

The second causative factor of troubles of this character is septic infection during labor and subsequent to abortions. A recognition of this fact will, of course, suggest to every physician the necessity of absolute asepsis in his management of accouche-

ments. The importance of prenatal disinfection of the genital tract, the making of examinations as infrequent as possible, and with a surgically clean hand, followed by absolute cleanliness in the after treatment should be impressed upon us all.

The ubiquitous granny woman who does not even appreciate the fact that it is more important to wash her hands before than after attending a case of confinement is largely responsible for the conveyance of septic infection that has condemned many a woman to a life of suffering. Prompt legislation on this point is one thing, the necessity of which I am anxious to impress upon this society.

No one as entirely ignorant of everything that could make parturition safe as is the best that could be found of the genus midwife, should ever be allowed in the natal chamber. And her abolition absolutely and entirely, and a substitution of trained obstetricians of either sex would diminish the cases of pelvic suppuration at least 50 per cent. I hold the doctors are largely responsible for the laxity of laws bearing on this subject. We should go to the legislature in an organized body authorized to demand of them, in the name of humanity, laws calculated to correct these evils.

At present there are two great methods of dealing with pelvic suppuration, viz: Vaginal and suprapubic.

The great leaders of the vaginal method advise that the uterus and appendages both be removed, even in cases where the uterus is apparently but little involved, holding that as the uterus is the first focus of infection, it is almost without exception involved in the septic process, and as long as it remains, it is liable to keep up systemic infection.

I contend that it is not good surgery to remove the uterus under such circumstances only in very exceptional cases.

I am opposed to the vaginal method of operating for the following reasons: First, intrapelvic adhesions cannot be dealt with as perfectly as by the suprapubic route. As long as such adhesions are allowed to remain, the patient will not have been relieved of symptoms.

There is a small per cent of cases in which the accumulation of pus is so large, and the patient so overcome with the septic absorption, that it would mean certain death to attempt to do a radical operation at once. In these cases, as a preliminary measure, I consider vaginal puncture and drainage good surgery, looking on this as a means of only temporary relief to allow the patient to recuperate and become fortified for a suprapubic radical operation.

When the question of operation is decided upon and it only remains to determine the method. I am unequivocally and unmistakably in favor of the suprapubic route in all cases.

As before said, only by this method can intrapelvic adhesions be dealt with as to be sure that they will not in the future be a source of annoyance and danger to the patient.

The danger of sepsis is much less, for by no other method can such a toilet of the peritoneum be made as to leave no focus of infection. Hemorrhage can be better controlled and the danger of secondary hemorrhage is lessened; and infinitely easier to control if it should occur. In addition to this, clinical evidence, to which I wish to add my contribution, bears me out in saying that the results in cure of symptoms and restoration to perfect health, are as good as could be claimed by the advocates of the vaginal route.

I would say here a word against the Trendelenburg position in operating on pus cases. It is almost impossible to remove a pyrosalpinx of any magnitude without rupturing the sac. If the patient is in the Trendelenburg position, pus, by mere gravitation, finds its way readily towards the diaphragm among the folds of the intestines and makes it very difficult to certainly free the peritoneal cavity of septic material. On the other hand, in the horizontal posture, the pus will, with equal certainty, gravitate into Douglas' cul-de-sac and can readily be removed by sponging and flushing, without coming into contact with a large peritoneal area.

I consider it safe to use glass drainage in all pus cases and

dangerous to omit it in any case whenever there is a suspicion of purulent trouble.

Twenty-four, or at most forty-eight hours, will tell if there will be further need of it, when it may be removed without at all retarding the closure of the abdominal wound. I wish now, gentlemen, to report three cases of pyrosalpinx operated on by the suprapubic method:

Case No. 1. Mrs. W., aged 25 years, married five years, no children. Gives history of gonorrhoeal infection six months previous to operation. Diagnosis, double pyrosalpinx. Operation July 15, 1895. Two large pus tubes and ovaries were removed, a large quantity of pus escaping into peritoneal cavity which was immediately flushed with Price's flushing apparatus, consisting of funnel and soft rubber tube. Wound closed with silk worm gut and not disturbed until tenth day, except to withdraw glass drain thirty-six hours after operation (which was done without removing dressing), when stitches were removed. Patient made an uninterrupted recovery.

Case No. 2. Mrs. H., age 27 years, married five years. Two abortions. History of gonorrhoeal infection. Complained of pain on right side and had fever for six weeks before I saw her. On examination, found large pus sac on right, pushing the uterus over to left. Operated July 20, 1895. Tube and ovary on right were removed, but left side not being diseased was left intact. Recovery uneventful.

Case No. 3. Mrs. B., married ten years, had two children, and one abortion three years ago; had leucorrhoea ever since; was curetted twice with no improvement. September 10, 1895, examination revealed a mass on each side uterus and operation insisted on. Operation September 16, two large pus tubes and ovaries were removed, adhesions broken up, wound closed after providing for drainage with glass tube; tube left in forty-eight hours. Recovery perfect; no trouble since.

THE

JOURNAL

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Editorial.

The May Meeting.

The next annual meeting is almost upon us. The officers of the various sections are already busily engaged in arousing interest throughout the State. Last year many who promised papers did not come. This ought not to occur. There is too much that is of interest among our professional men to make a dearth of papers excusable. It was suggested by our president that if all the ex-presidents would come and read papers the programme would be filled. We hope he has not forgotten his advice, or that he is now in a position to set a worthy example.

Do not postpone the preparation of your paper until it is too late to get it upon the programme. We want to announce it in our next issue.

Little Rock has been a favorite meeting place and is the logical home of the society. She will make your stay here pleasant, and cordially welcomes every member, hoping that the meeting will be a profitable one for the society.

The Osteopathic Fad.

The legislature of North Dakota has just passed a law legalizing osteopathy, and the "bone doctor" can now elbow his hitherto arrogant and misguided brother in the regular profession. The professional mind can reconcile itself to the attacks of temporary imbecility which seize upon the public periodically and run their course. The Schlatter craze is a conspicuous example, but it will find it hard to realize that a sovereign State, possessing a common school system, newspapers, and other agencies for diffusing knowledge, could enact laws legalizing and giving a quasi respectability to a fraud like this. We extend our sympathy to the profession of a State so publicly insulted by its lawmakers.

In Memoriam.

During the last few months four prominent members of our society have passed away, universally beloved and respected in the communities in which they lived. Their loss will occasion widespread regret and sorrow among those who have met them from year to year at our meetings, and in daily professional life.

Three of them had reached the fruition of busy life, the youngest was only at the meridian. Is it better after all "just at life's richest, sunniest moment to strike the unseen rock and hear the breakers roar above a sunken ship," or to wait patiently the summons which is sure to come?

There is no man so near to those about him as the family physician. When death claims him those who have leaned upon his skill, and felt his kindly touch upon beds of sickness, follow him to his grave with feelings of regret and loving tenderness. "To live in hearts we leave behind is not to die."

The Arkansas Medical Society.

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COUNTY.	MEM'S	PRESIDENT.	SECRETARY.	MEETING PLACE.	STATED MEETINGS.
Ashley	5	I. J. Newton, Hamburg	J. W. Simpson, Berea	Hamburg	
Benton	22	W. G. Floyd, Bentonville	C. E. Hurley, Bentonville	Bentonville	Bimensal.
Boone	16	J. T. Tipton, Lead Hill	L. Kirby, Harrison	Selected by vote of society	Quarterly.
Carroll and Eureka Springs		R. P. Moore, Oak Grove	L. W. Weaver, Eureka Springs	Eureka Springs,	Quarterly.
Garland Hot Spgs Med So	16	H. P. Collings, Hot Springs	E. C. Hayes, Hot Springs	Hot Springs	Monthly.
Independence	23	T. J. Woods, Batesville	J. W. Case, Batesville		Quarterly.
Jackson	15	J. M. Green, Newport	J. M. Jones, Newport	Newport	Monthly.
Jefferson	30	J. W. Withers, Pine Bluff	J. P. Runyan, Pine Bluff	Pine Bluff	Monthly.
Lawrence	14	N. R. Townsend, Black Rock	Albert Thornburgh, Sedgewick	Selected	Monthly.
Mississippi	5	W. R. Harrison, Bardstown	C. A. Turner, Osceola		
Phillips		D. A. Linthicum, Helena	M. Fink, Helena		Monthly.
Pope	10	L. T. Ragsdale, Pott's Station	J. A. Westerfield, Atkins		
Prairie	8	F. A. Hipolite, DeVall's Bluff	J. R. Lynn, Des Arc	Des Arc	Annually.
Pulaski L. R. Med. So.	45	A. H. Scott, Little Rock	F. Vinsonhaler, Little Rock	Little Rock	First and third Monday of each month.
Saline		D. N. Fisher, Benton	J. M. Phillips, Bryant	Benton	
Sebastian	26	E. G. Epler, Fort Smith	J. D. Southard, Fort Smith	Fort Smith	Every second Tuesday.
Washington		John Young, Springdale	T. W. Blackburn, Fayetteville		

Report from Phillips County Medical Association

Journal Arkansas Medical Society:

Dear Doctor—At the January meeting of our society the following officers were elected for the ensuing term: President, Dr. A. A. Hornor; Vice President, J. W. Bean, of Trenton; Secretary and Treasurer, Dr. M. Fink. The new president appointed the following annual committees:

Committee on Science and Progress of Medicine—Drs. M. Fink, W. C. Russwurm and Wm. Richardson.

Committee on Judicial Council—Drs. D. A. Linthicum, M. L. Pearson and J. W. Bean.

Committee on Credentials—Drs. F. N. Burke, T. C. Linthicum, G. E. Penn.

Committee on Printing, Finance and Claims—Drs. C. R. Shinault, J. H. Thompson, J. H. Vineyard.

The society meets in the city hall the first Tuesday in each month at 10 o'clock. The following is a complete list of the membership up to date, all of whom reside in Phillips County, viz: Drs. F. Burke, D. A. Linthicum, A. A. Hornor, J. H. Vineyard, of Vineyard; M. L. Pearson, Poplar Grove; W. C. Russwurm, T. C. Linthicum, M. Fink, C. R. Shinault, H. M. Thompson and G. E. Penn, Marvell; J. W. Bean, Trenton; W. M. Richardson, Latour.

On the roster of the State society appears the name of Dr. Hughes, of Phillips County. While the doctor was an active member of county and State societies while alive, his activity ceased on account of his death, which occurred several years ago.

Yours fraternally,

M. FINK,

Secretary.

Society Locals and Personalities.

The absence of several of the members from the society during the last two or three meetings has been noteworthy, but highly excusable. They were the victims of "outrageous fortune," as the following will attest: Dr. J. W. Bean, the vice president-elect, succumbed to typho-malarial fever, complicated with meningitis, seriously sick for nearly three months. Dr. T. C. Linthicum thrown from his horse, dislocating his knee and fracturing the fibula. Dr. J. H. Vineyard, one of the founders of the association, the wit and one of its most valued members, was stricken with paralysis. All have now reached the convalescent stage, except Dr. Vineyard, whose condition is critical—almost hopeless.

The recent smallpox epidemic was brought to a speedy termination, thanks to the activity of the Board of Health and the valued assistance of Dr. Russwurm, acting city physician. He was the recipient of praise from profession and laity for the efficiency displayed in handling and stamping out the disease in a comparatively short time.

The society discussed smallpox and vaccination at its last meeting. The recent experience with the disease made the discussion somewhat interesting, particularly that from the city physician.

The new officers just inducted into office promise, with the friendly support of the members, to accomplish great things for organized medicine.

The subject for discussion at the next meeting will be "Exanthematous Diseases," Dr. F. N. Burke leading the discussion.

The members of the society have been kept busy up to a few weeks ago attending la grippe cases, the disease being epidemic in both city and county during the greater part of the winter.

M. F.

Pasteur's Remains Removed.

The remains of Professor Louis Pasteur, who died September 28, 1895, were removed December 26, 1896, from the Cathedral of Notre Dame to the Pasteur Institute, where they were received by a gathering of distinguished men, including Premier Meline, William Rambaud and Brisson and several well known men from Great Britain. President Faure and Gen. Billot, the Minister of War, were represented at the ceremony. Speeches were made at the crypt of the Institute by M. Rambaud, M. Bodin, President of the Municipal Council of Paris, and Dr. Evans, Dr. Rice Buckworth and others.

Menstruation in the Eskimo.

Dr. Cook, who was with the Peary Expedition, reports that Eskimo girls do not begin menstruating until they are 18 or 20 years old. It has, however, been stated that they may conceive and bear children at a much younger age, a fact which has been adduced to show that there is no necessary connection between ovulation and menstruation.—Boston Medical and Surgical Journal.

Obituary Notices.

Dr. James A. Dibrell.

Dr. James A. Dibrell died at his residence in Van Buren, Ark., on the morning of February 23, 1897. He was born in the city of Nashville, Tenn., August 15, 1817. His father was Edwin Dibrell, of Virginia, whose ancestors were Hugenots who fled from France and settled at Mannikin Town, on the James River, in 1700. Dr. Dibrell's mother was Martha, the daughter of Drury Shrewsbury, of Kentucky, a descendant of English stock.

Dr. Dibrell received his literary education in the University of Nashville, of which institution he was a graduate. He was particularly fond of the classics and during his entire professional life, which was indeed a busy one, he often found delight in recurrence to these studies which had so impressed him in his early career. Dr. Dibrell studied medicine in Nashville three years under the preceptorship of Dr. Thomas R. Jennings and finished his collegiate medical studies in the University of Pennsylvania, graduating from that institution in the year 1839, and was the oldest graduate in the State at the time of his death. He had the advantage of the instruction of Professors Chapman, Horner, Hare, Wood, Jackson and Gibson, all distinguished men of that day, who have left their indelible imprint on American medical literature. Shortly after his graduation he removed to Van Buren (about 1840) and there he continued to live and practice his profession all his life, with the exception of a few years during the civil war when he resided temporarily in Little Rock.

Dr. Dibrell, with some army surgeons then stationed at Fort Smith, organized the first medical society in Arkansas, if not in the entire Southwest. This was about the year 1845 and he was ever afterwards a member of either the county or State medical organization or of both. He was also a prominent Mason, having taken his first degree in 1841 in Van Buren Lodge No. 6, and has taken all the degrees up to and including Knight Templar.

Dr. Dibrell married two sisters, Ann Eliza and Jane Emily Pryor. His first marriage was with Miss Ann Eliza Pryor, born in Nashville, October 8, 1828, the daughter of Colonel Nicholas Pryor, a native of Virginia. His sister, Mrs. Dibrell's aunt, married a brother of President Thomas Jefferson.

By his first marriage Dr. Dibrell had five children, viz: Angela Medora, born December 9, 1841, who is now the widow of the late Dr. E. R. Duval, of Fort Smith; James Anthony, born August 7, 1844, died July 9, 1845; James A., born August 20, 1846, and now residing in Little Rock, where he is one of the leading physicians; Thomas Henry, born September 9, 1849, died July 19, 1853; Ann Eliza, born January 1, 1852, and now the wife of Mr. George Sparks, of Fort Smith.

The first Mrs. Dibrell died at Van Buren March 10, 1854, and his second marriage which occurred at Van Buren March 27, 1855, was with Miss Jane Emily Pryor, sister of his first wife. By this marriage four children were born. Sarah Susan, November 10, 1856, the wife of Dr. George F. Hynes, of Fort Smith; E. R. Dibrell, now practicing medicine in Little Rock; Irene Griffith, born July 4, 1860, the wife of Mr. Shibley, of Van Buren, and Matt S. Dibrell, born December 3, 1867, the worthy successor of his father at Van Buren.

For fifty-seven years Dr. Dibrell's life had been a part, and an important part, of the history of western Arkansas and the whole State. While he strived to know all about his chosen profession and made its study and practice his chief object in life, he was by no means unmindful or indifferent concerning the great questions of the day and took an important part in building up his section of the State. He had been identified with every important move for the betterment of his State, his county and his town. A man possessing his store of general information must have been a valuable consultant in other things than medicine and Dr. Dibrell was always ready to give his time and talents for the good of his people.

The medical profession of his county and of the

State bestowed upon him the highest distinction within their power. He was elected president of the Arkansas Medical Society in 1886, after having held all the offices from time to time within the gift of his local medical society.

While Dr. Dibrell was a typical courtly gentleman of the "old school" he was the ideal of a progressive physician who incessantly strived to keep up with every detail of the advance of medical science and its collateral branches. He investigated every innovation and adopted such as proved to be useful. He was exceptionally free, in his latter days, from that bias of many old physicians which tends to make them look upon only the old modes of treatment as trustworthy, while they distain the evidence of new discoveries in medical science.

Dr. Dibrell literally died in the harness. He had been the only medical practitioner some of the old families had had during the fifty-seven years of his residence in Van Buren. He was indeed the "family physician" to many of these old residents and in that respect belonged to a class of physicians who are fast disappearing from the face of the earth, and are perhaps the last that will ever be known in such an intimate and reliable capacity.

Dr. Dibrell's death was, as his life had been, ideal. He had lived his allotted time of life, he had filled every station to the best of his ability. Though the battle was long and often dreary he never doubted that a just God who gave him his rewards in this life would bestow them in that which was to come. He was a Presbyterian in religion, having been a ruling elder in that church since 1848, and was as faithful a member of the church as he was a practitioner of medicine.

He saw his approaching end long before it came and was not disturbed. He was ready and willing to die and this he did calmly and peacefully as only one who had spent such a life could have done.

No higher tribute could have been paid to the memory of a good man and good physician than was shown by the universal sorrow that pervaded the homes for miles around Van Buren when the sad news came that Dr. Dibrell was

dead. The funeral was one of the largest ever seen in western Arkansas and manifestations of the deepest grief were not confined to any class of people. It was felt and shown by everybody who knew him and by hundreds who did not know him personally, but had so often heard of his good deeds that they shared in the general feeling of personal loss. All the business houses in Van Buren were closed on the day of the funeral and the streets were filled with all kinds of vehicles bringing friends from the very remotest parts of the country wherever the news of his death had been known.

In Memory of Dr. J. A. Westerfield.

Dr. J. A. Westerfield was born in Conway County, State of Arkansas, on the 27th day of August, 1857, and died at his residence in the town of Atkins, Pope County, on the 7th day of February, 1897. The day following, his wife, Margaret Westerfield, died. Dr. Westerfield had been married the second time. He left three children and his aged parents to mourn his death. His literary education was commenced in the common schools of our State, and later he attended the A. I. U. at Fayetteville, Ark. During his time there his health was bad, and I have heard him say that he almost despaired at one time of ever being able to complete his course. After leaving Fayetteville he entered upon the study of medicine, as his lifelong work, attended the Medical University at Louisville, Ky., from which he graduated in 1880. He was greatly devoted to his profession, and no one was more sympathetic than he when around the sick bed. It was with vigilance that he watched his patients, with care that he studied every case which he was called upon to treat. He was true and patient, loving and kind to the families who called him to the bedside of their sick. In that sense he was a true physician; he was as a father, as a brother and a doctor to his patients. As a surgeon he was quite successful, performing many very difficult operations, as is well known to the medical fraternity of this State. There was never a man whose death was felt more keenly than his in the community in

which he lived. It was with one accord that all proclaimed his worth to the community of the sad bereavement which had befallen them at his loss. As a friend there was none truer, ever ready to devote his time and money to the relief of the needy. He was generous to a fault, kind in every particular. On the 5th day of February, 1887, he was raised to the sublime degree of a Master Mason, and in no part of his checkered life did his truth shine forth with more brilliancy than here. He was not only a man in name but in deed and truth. To him Masonry meant something more than the mere display of badges and white aprons. He was also a member of the Royal Arch Chapter and a very zealous worker, ever in attendance to the meetings when possible. J. F.

Death of Sir Spencer Wells.

[The Medical Age.]

On Monday, February 1, this well known surgeon and ovariotomist died at Cannes, France. He was the eldest son of the late Mr. Wells, of St. Albans, Hertfords, his mother being Harriet, daughter of the late Mr. Wright, of Richmond, Surrey. He was born in 1818 at St. Albans and educated at Trinity College, Dublin. His first medical experience was in the infirmary at Leeds, but he subsequently studied in the anatomical school at Dublin and at St. Thomas' Hospital, London. In 1841 he became a member of the Royal Academy of Surgeons, and three years later was elected one of the Honorary Fellows. Having become assistant surgeon in the royal navy, he saw considerable active service both afloat and ashore, before and during the Crimean war; and in 1854-55 he was connected with the auxiliary hospitals at Smyrna, Renkoioi, and elsewhere in the Turkish Levant.

At the close of the Russian-Turkish war he returned to England and revived the operation with which his name has been chiefly associated, and ultimately became surgeon to the Samaritan Hospital for Women. In April, 1883, in acknowledgment for "distinguished services rendered to the medical profession and to humanity," her majesty conferred upon him the honor of a baronetcy.

It may be safely said that no man in modern times has more fully scaled the pinnacle of fame than Sir Spencer Wells, and his contributions to medicine will for many years to come be accepted as the chief authority upon those topics to which he gave most attention.

Book Notices.

Swedish Movements, or Medical Gymnastics.

By Dr. T. J. HARTELINS, Stockholm, Sweden.

[Published by the Modern Medicine Company, Battle Creek, Mich.]

Dr. Hartelins, the author of this work, was for many years director of the Central Institute, of Stockholm, Sweden, the Institute founded by Ling, under the patronage of the Swedish government.

In view of the growing importance of manual Swedish movements in various forms of chronic disease, especially cardiac diseases, has caused a general interest in this subject. This work by Dr. Hartelins has long been used as a text-book in the Central Institute in Stockholm, and now that the work has been translated into English, it is perhaps the only work in English that could properly be deemed authentic or authoritative. The translation is by A. B. Olson, B. S., M. D., and is thorough. The work is edited by Dr. J. H. Kellogg, who studied this system in Sweden under the author, Dr. Hartelins. Numerous illustrations, which clearly show the position for every movement, day orders, prescriptions, etc., are contained in the book. It is substantially bound. Price, $1.50. Address, Modern Medicine Company, Battle Creek, Mich.

Year Book of Treatment.

LEA BROS. & CO., Philadelphia.

This being the thirteenth issue of the present abstract and brief chronicle of the therapeutic work of the past twelve months, the "Year Book of Treatment" may now be considered to have taken its place among the "hardy annuals" of medical literature. It may therefore be assumed to be so well known as to make a formal introduction to readers superfluous. There

are a few changes in the staff of contributors to report. The section of Diseases of the Lungs and Respiratory Organs has been entrusted to Dr. Gustave Schorstein; that on Diseases of the Kidneys and Diabetes to Dr. Francis D. Boyd; that on Diseases of the Nose and Throat to Dr. St. Clair Thomson; that of Public Health and Hygiene to Dr. Willoughby; while Professor Nestor Tirard has contributed a summary of general therapeutics.

THE EDITOR.

Inebriety, Its Source, Prevention and Cure.

By C. F. PALMER.

[Published by Fleming H. Revell & Co., Chicago.]

This volume contains the history of the temperament and influences that have to do with creating an inebriate. It is a side of the question too often ignored. The subject matter is clear, concise, and the style pleasing. Those interested in the study of this subject will find this book worth reading.

The World Moves.

In the Budget Committee of the Austrian Reichsrath on November 7, the Minister of Instruction, Baron Gautsch, made a statement to the effect that the government was preparing legal measures for next year to admit women to all faculties of the universities, except that of theology, and also to grant to the women who have obtained medical degrees at foreign universities the right of practicing in Austria after having undergone an examination.

Sir Joseph Lister and Professor Michael Foster were elected honorary members of the Asiatic Society of Bengal at the last annual meeting, in place of the late Professor Huxley and M. Pasteur.

Selected Articles.

Report of a Case of Reinfection of Syphilis.

By HOWARD PAXTON COLLINGS, B. S., M. D., Hot Springs.

In consideration of the fact that there are so few authentic cases of reinfection of syphilis on record, and that so many of the great syphilographers of this country and abroad say in their writings that they have never seen such a case, I feel justified in placing this one on record.

The patient, Fred C., aged 28 years, single, a miner by occupation, came to me a year ago and gave a history then of having had a chancre eight years previous, followed by secondary manifestations. The resultant scar of the chancre is located on the dorsal surface of the penis to the right of the median line, and about one half inch from the corona glandis. The patient is a very intelligent man, and gives a perfectly clear history. The chancre appeared twenty-one days after intercourse, and this in turn was followed by a roseolar rash over the body, alopecia, and mucous patches in the mouth and throat. In all, his treatment extended over two years, during which time he made two trips to the Springs, taking a thorough mercurial course, in conjunction with the baths and under the direction of competent physicians whom you all know. During the first eighteen months of the disease he had mucous patches in his mouth and throat a good part of the time.

After the lapse of two years from the appearance of the chancre he went west to the Pacific slope, and for six years he remained absolutely free from any syphilitic manifestation. When I saw him a year ago he had some rheumatic pains, which I thought due to his occupation—mining—and prescribed for him accordingly, with relief. I could then find no evidence of syphilis whatever.

He came to my office again the 2d of last month and gave the following history: About August 1 last, nearly nine years after the first chancre and twenty-eight days after exposure,

there appeared a chancre on the dorsal surface of the penis one half inch from the corona, to the left of the median line, the scar of which can be plainly seen and felt now. Six weeks from the appearance of the sore mucous patches developed about the anus, to which he applied various salves without relief. Two weeks later, or about two months after the appearance of the chancre, an eruption appeared on the scalp. These spots were present when I saw him, and were as large as a one-cent piece and moist. At the end of the tenth week a mucous patch developed on the under surface of the tongue to the left of the frenum. This has disappeared under treatment, but there is now one plainly seen on the tip of the tongue. Toward the close of the thirteenth week there developed two spots on the left calf and one over the right gluteal region. These were as large as a silver twenty-five-cent piece, dark, excoriated, and moist, and, while they are now healed perfectly, they are still considerably pigmented.

When I saw him at the beginning of the seventeenth week of the disease, the epitrochlear glands, the suboccipital, and those in the inguinal region were markedly enlarged.

This I believe to be a true case of reinfection of syphilis, and, although we all see a great number of syphilitic patients here, this is the only one I have seen which has shown positive evidences to me of a reinfection.

The Present Status of the Serum Treatment of Diphtheria.

BY WILLIAM CHEATHAM, M. D.

As there have been over one million injections of antitoxin made up to this time, some proper conclusions as to its use and results are being arrived at. It has reached such a stage that an assertion made many months ago "that it is criminal to treat a case of diphtheria in its early stage without antitoxin" can be justly repeated with increased vehemence.

Such investigations have been made as to render positive as-

sertions as to its efficacy possible. The fight between the exponents and opponents of the serum treatment of diphtheria was at one time too vindictive and too personal to be of any scientific advantage; as the hotheads have cooled down enough to analyze facts, they have come to realize the truthfulness of the saying of Virchow early in the fight. All the arguments of the opposition have been met and silenced, except a very few, and even those who advanced such arguments are now, in poolroom vernacular, "hedging."

We cannot yet claim it as a specific, yet Jacobi, who at first opposed the use of the serum, says in a recent article, "It will be entitled to be claimed as a specific, though it have not the power to cure every case of diphtheria, any more than quinine cures every case of malaria, or mercury of syphilis." Many say, if injected the first day of the disease, no case need die.

My experience with it has been exceedingly favorable. Of the many cases in which I have used it, there have been exceedingly few deaths, and my dread of diphtheria has decreased to such proportion as to render me very much less worried when called to see a case. It does not do away with other treatment, as many suppose, but does away with so much of it as to render it almost nil, not only as to quantity but as to perseverance and severity. A case seen in the last few days will illustrate what I mean. All cases do not end so, but it is more the rule than the exception.

J., a girl 5 years old, had had diphtheria, so far as known, two days; she was quite hoarse; pulse weak and irregular; a typical membrane was on the palate and pharynx; it was a typical case of diphtheria of the pharynx, soft palate, and larynx; a case in which, without antitoxin, I would have immediately advised intubation. I gave her 4 c. c., or 1,000 units of serum, injecting it into the outer part of the left thigh. I first washed the part well with alcohol, and used ethyl chloride as a local anesthetic; with this the injection gave little or no pain. A 5 per cent solution of acid carbolic can be used instead of the alcohol; it is not only a good cleanser, but also a local anesthetic. My

needles I wash in the same solution. After the injection no pressure was made to distribute the serum. The part was again bathed with alcohol, and a small piece of cotton with alcohol on it placed over the wound, and held in place by an adhesive strip. No reaction whatever followed. All membrane in sight was gone the next day; pulse was good, temperature about normal; patient with a good appetite, and voice nearly clear in three days. As I stated before, this is not an exceptional case. The little patient made a good recovery.

If the general practitioner who usually sees these cases first will early in the disease make or have made a serum injection, the above history will be much more common than it is now. Do not wait for a bacteriological investigation. The serum, if fresh and pure, and if properly injected, is harmless; and a membrane in a throat with no history of trauma means, in ninety-five cases in a hundred, diphtheria—so why wait. As to the objections urged against the serum treatment of diphtheria, all of them have been about swept away by the investigations and conclusions of 1896. A few deaths have been attributed to its use, but not proven. Five, I believe, in over one million of injections, and not one which could be proven beyond any doubt as the result of the serum. It is true, death might not have occurred in three of the cases had not the injection been made. Even admitting that five or twice five deaths had been the direct result of the serum injection, who of us would not take such a chance? Some of these cases were very sad indeed, cases in which the injections were made for immunity; this, I think, is unnecessary in a majority of cases, as there are no better immune agents than fresh air and sunlight. Still reports as to immunizing are very encouraging, as will be seen from the following, which is from Dr. Biggs' last report, Medical News of New York, December 26, 1896: Number of cases, 17,516. Of these there were 109 attacked with mild diphtheria in thirty days, and one fatal. After thirty days there were 20 mild, and 1 fatal; or in 17,516 cases there were 129 mild cases and 2 fatal, which I think is a great result. The other statistics of Dr.

Biggs seem to me to be unanswerable. For instance, in 79,085 cases treated by antitoxin in different parts of the world, the death rate was about 16 per cent; in cases treated without antitoxin the death rate was between 30 and 40 per cent. Or, take another series of cases: In a total of 2,930 cases treated with antitoxin 436 died, giving a mortality of 14.9 per cent, while of 3,625 cases treated without antitoxin at the same time, or during intervals of forced interruption (owing to lack of antitoxin), 1,455 died, a mortality of 40 per cent. Virchow, who is frequently quoted, and who at first was opposed to the use of antitoxin, said, "All theoretical considerations must give way to the brute force of the figures, and I consider it the duty of every physician to use a remedy giving such clinical results."

Dr. Herman M. Biggs says further, in his more recent article, that "Baginsky, in commenting on this circumstance, says, 'It is all the more remarkable, as the ratio of mortality of those treated with the serum, before and after the period of interruption, varied within very small limits. If one will permit figures to speak at all, there has scarcely been made on human beings a more demonstrative test of the curative power of a therapeutic agent. It was an experiment forced upon us, but it proved to us how terrible was the form of disease which we were treating, and how numerous would have been the victims without the use of the healing serum.' "

Professor Virchow again reiterated his opinion in a report which was read on the antitoxin treatment of diphtheria in the same hospital, on December 25, 1895, when he said, that from April to November of that year 303 cases out of 335 treated had recovered, the mortality, which had formerly been 43 per cent, having decreased to 9.5 per cent.

Vucetig reports two groups of cases of thirty each, one treated with antitoxin and the other with Loeffler's solution; the antitoxin cases gave a mortality of 6.6 per cent, the others a mortality of 20 per cent.

According to the official records of the Austrian Health

Department there were treated during the month of February, 1896, in all Austria 1,128 cases with antitoxin, with a mortality of 13.2 per cent, whereas 1,849 cases, which were treated without antitoxin at the same time, gave a mortality of 38 per cent.

Rauchfuss reports thirty-four cases treated in hospital with a mortality of 21 per cent, and thirty control cases treated at the same time without antitoxin with a mortality of 52 per cent.

Von Engel, in Bohemia, reports thirty-nine cases treated with antitoxin with a mortality of 25.5 per cent, and sixty-two cases treated at the same time without antitoxin with a mortality of 50 per cent. The antitoxin cases in these reports are said to have been unusually severe, and therefore taken as a test of the new remedy.

Heubner reports 299 cases treated with antitoxin in the Hospital Charite in Berlin with a mortality of 16.7 per cent, and 249 cases treated in the Bethany Hospital at the same time under the same conditions of age, season, etc., without antitoxin with a mortality of 43 per cent.

Blumenfeld reports 229 cases treated in private practice with antitoxin with a mortality of 8.7 per cent, and 48 cases not treated with antitoxin, because they were considered to be too mild; the mortality among the "mild cases" was 23.6 per cent as against 8.7 per cent among the apparently severer cases treated with antitoxin.

Many examples of the same kind might be cited from the published reports, fuller details of which will be found in the Bulletin of the Health Department (of New York), but from these it may be seen that the antitoxin treatment has stood the test of comparison with other approved methods of treatment whenever the contrast has been decidedly drawn.

The date of the administration of the antitoxin is of the greatest importance; this is really the obstacle that is the most difficult to overcome in this treatment of diphtheria. All who use it know the several reasons for it, which are not necessary to give here; the cost is but little, and any doctor with a clean hypodermic syringe should be able to use the remedy. So the

objections which have heretofore been advanced against the use of diphtheria antitoxin are being, as I stated before, rapidly dissipated.

The amount of membrane present does not indicate the amount of sepsis to be expected. I hear gentlemen reporting cases in which there was membrane covering an immense space and yet the child got well. So long as this does not act in a mechanical way to obstruct respiration it is not necessarily of great prognostic importance, as I have frequently seen such cases get well, while others died promptly with an exceedingly small amount of membrane. Its location and the activity of the absorbents, with the power of resistance of the patient, have more to do with the result. Other toxines, the result of other bacilli than that of Loeffler, are the cause of the bad results in many cases of diphtheria, whether antitoxin is used or not. So, when antitoxin fails, it is not so much the failure of the remedy as it is that of the ignorance or carelessness of the attending physician in not making the injection before other toxines are produced. All of us see such cases, not only of our brother doctors but of our own, and in making these statements I include myself with the derelict. Many of these cases, in small children especially, have membrane in undiscoverable localities. In such cases the heart and general condition of our patient can be our only guide.

In a certain class of cases, I refer to those in which croup is a prominent element, even with no membrane in sight, with our present knowledge of its pathology, there should be no hesitancy in using the serum, and I believe one who does not use it is guilty of great negligence. We can have membrane on the cords which might be difficult to make out although the patient will permit the examination; and it must be remembered that membrane in this location, if it does not produce mechanical obstruction, may give little or no constitutional disturbance, as its products are not absorbed on account of the presence of a normal basement membrane in the mucous lining. To the serum in these cases calomel by fumigation can profitably be added. These cases in which intubation and tracheotomy had to be per-

formed formerly, and those in which the conjunctivae are involved, cases in which before antitoxin was used a majority of the eyes were lost, demonstrate to us the wonderful and beneficent effect of antitoxin in diphtheria.

In one hospital in New York the number of cases of broncho-pneumonia occurring after the use of antitoxin was urged against the use of the remedy. As soon as the rooms were kept at a temperature of 70° there were no more cases of broncho-pneumonia which had not developed before admission. The serum does not affect the blood unfavorably; the eruptions and joint involvements it occasionally produces amount to nothing: it has been demonstrated beyond doubt that its use does not increase the danger of any kidney involvement nor after paralysis.

In all the cases in which I have used antitoxin I have never seen an eruption or a joint involvement; have never had but one to die of the kidneys; have seen but little paralysis; have seen the membrane disappear in half the usual time; have usually seen the temperature fall promptly, and the child's appetite improve very much. The cheerfulness of the patient improves wonderfully, all this with antitoxin alone, or with little or no other treatment, either local or general. This is not in all cases. If the child receives the injection late, cell tissue destroyed cannot be restored. Bearing on this point is a recent report on a recent epidemic in Chicago. Of 65 children injected the first day of the disease, all got well; of 187 the second day, 3 died; of 372 the third day, 10 died; of 109 the fourth day, 17 died. From this the importance of an early injection can be readily seen. A fair criticism of any remedy can result in nothing but good. Professor Soltman gives us the following quotation from a German poet:

> "The best critics in the world are they
> Who, along with that which they gainsay,
> Suggest another and a better way."

These three lines answer, I think, all criticisms that have been made on the serum treatment of diphtheria. It is not a cure-all. The dose and some few other points of importance, in my opinion, have not yet been definitely settled. Even accepting the statistics given as "double edged," yet, as Soltman says, "Suggest another, and a better way." I believe the serum treatment of diphtheria is the best that has yet been offered; that in the full sense of the word it is not a specific; yet, if used in the first or second days of the disease, in the proper dose (which has not yet been definitely settled), it is as much a specific as quinine in malaria, or pot. iod. and mercury in syphilis.

Report of Two Successful Cases of Prostatectomy.

BY LUCIUS W. HOTCHKISS, M. D.

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The first case I have to report is that of a man, 67 years of age, who was twice a patient during my service at the J. Hood Wright Memorial Hospital.

He was admitted in November, 1895, with an attack of acute retention of urine, which his physician had been unable to relieve by the use of the catheter and for which suprapubic aspiration of the bladder was resorted to.

His previous history was indefinite, but indicated that he had been suffering for some time with difficulty in emptying his bladder. He was in possession of a dirty catheter which, he said, he had been in the habit of using occasionally for several months. At this time he had a very acute cystitis, and the prostate could be felt as a very large tumor projecting backward toward the rectum. His urine was very foul, and the calls to urinate were very frequent. The amount of residual urine varied from four to six ounces or more. He was treated by rest in bed and daily irrigations of the bladder with various solutions. Under this treatment he improved considerably, his residual urine dimin-

ished in amount, and he was quite comfortable. The size of the prostate, as evidenced by rectal touch, seemed somewhat decreased, and at the end of about a month, when he was discharged to become an out patient, he could pass his urine himself without much difficulty. He was instructed how to keep his catheter clean and how to use it. At this time he was anxious to have some operation performed for his permanent relief, but his apparently feeble condition, and the fact that he had improved so much under palliative measures led us to decide against it at that time.

On January 22, 1896, he was readmitted to the hospital, suffering with another severe attack of cystitis. He had failed to report as advised, and had neglected the instructions as to the necessity of cleanliness in the use of the catheter, his nature and environment being such that cleanliness seemed an impossible attainment.

Examination at this time revealed a very much enlarged prostate. A catheter was made to enter the bladder with considerable difficulty, and about four ounces of very turbid ammoniacal urine were withdrawn. His temperature was normal. The urine was 1.019 specific gravity, alkaline, full of pus and albumin. The old man was suffering intensely with vesical pain and frequent and difficult urination. He was much worn from loss of sleep, and appeared quite feeble. He was put to bed, and his urine drawn and bladder irrigated twice a day with a solution of permanganate of potassium, 1 to 2,000.

Under this treatment he obtained some relief, but on February 10 suffered from an attack of retention. The catheter withdrew fifteen ounces. From this time until the end of the month, when the operation was done, he continued to have pain and did not stand catheterism so well. As it did not seem possible for a patient to maintain catheter life safely under the conditions in which he was obliged to live, a suprapubic cystotomy was determined upon, with a view to maintaining permanent drainage in case it should not be found feasible to remove the prostate.

On February 29, 1896, a little over a month from the date of his admission, ether was administered and a suprapubic cystotomy done in the usual manner. After opening the bladder the large prostatic tumor could be felt by the finger. The enlargement of the lateral lobes seemed most marked, and the contact of their opposing sides with the prostate congested would seem to explain, in this case, the mechanism of his frequent attacks of retention. The middle lobe also projected somewhat, but did not constitute a distinct bar to the urethral outlet.

The pelvis of this patient was very deep, and considerable difficulty was experienced in enucleating the gland. An assistant aided me very much, however, by pushing up the prostate through the anterior wall of the rectum with his finger. The mucous membrane was spared as much as possible, and an attempt was made at a clean enucleation. This, however, was impossible, and the large succulent growth was removed piecemeal by the fingers and scissors. The specimen shows, I think, those portions of the median and lateral lobes which projected into the bladder and encroached upon the urethral outlet, and, though it is shrunken somewhat in the alcohol, represents a prostate of large size.

There was considerable oozing of blood during the enucleation, and the operation was prolonged and difficult. At its close the cavity of the bladder was packed with gauze, and drainage established by means of a large catheter through the suprapubic wound. Shock considerable; good recovery from ether. There was some hemorrhage during the night, which yielded readily to irrigation of the bladder with hot saline solution. The patient went along very comfortably for about ten days, the temperature never rising above 100 degrees F. On the 11th of March, following an attempt to remove the suprapubic drainage tube, the temperature went to 103.8 degrees F., and the patient had considerable pain. The tube was reintroduced and left for a few days more, the wound in the meantime granulating nicely, and temperature falling nearly to normal. By the end

of March the patient was able to pass a small amount of urine voluntarily and the wound had almost closed. After this time, when he began to sit up, the leakage became less, and he was able to pass more urine through the natural channel. On April 2 it was found that the catheter passed eight inches before entering the bladder, whereas just before the operation the urethral distance measured ten inches before the urine flowed. A rectal examination showed but very slight enlargement at the situation of the prostate.

On the 6th of April he could retain his urine for several hours and pass voluntarily seven ounces. No urine comes through the fistula, though there is a slight leakage when the bladder is distended during irrigation. The patient has slight dribbling away of urine from the urethra when standing.

May 2—The wound is closed.

11th—The patient is discharged.

As a result of this rather severe procedure in an old man a very good functional result was obtained. The patient was seen about two months ago. He has discarded the catheter, is able to pass his urine voluntarily, and says he feels very well. I am unable to state whether he still has residual urine or how long the intervals are between the acts of urination. His condition when he left the hospital was certainly good, and has evidently much improved since that time. I shall endeavor at some later time to make more accurate observations upon the final result of the operation.

The second case which I have to present is one of perineal prostatectomy in a man 66 years of age.

This patient was admitted to Bellevue Hospital on August 24, 1896, and the following brief history was obtained: Since the age of 20 he has had several attacks of gonorrhœa. Ten years ago he began to have serious difficulty in urination, which culminated in an attack of retention, which was relieved by aspiration of the bladder above the pubes. He remained in the hospital for a time and an external urethrotomy was performed for the relief of his strictures. As a result of this operation his

condition was much improved, but in a few months his trouble in urination began to return.

He says he has used the catheter occasionally ever since this time, and for the three weeks preceding the date of his admission to Bellevue he had used it constantly. He had suffered from frequent and painful urination for a long time, but for the previous three weeks the irritability of the bladder had become so intense and the spasm so painful that he had been obliged to pass water every few minutes, and had frequent attacks of retention, for which he resorted to the catheter.

On admission he presented symptoms of a very acute cystitis and his sufferings were intense. A catheter withdrew six ounces of urine, which was alkaline, of low specific gravity (1.010), and full of pus and mucus.

The patient could obtain no rest by night or day on account of the extremely painful tenesmus of the bladder. This clearly was not a case for rest in bed, with catheterization and irrigation. It was a case which seemed to call for immediate and free drainage of the bladder.

On August 25 ether was administered and a median perineal cystotomy performed in the usual manner. Previous to the operation the capacity of the bladder had been proved so small that the perineal route had been chosen as the simpler method of entering the small contrated viscus.

On examination of the bladder through the perineal wound by the finger, the lateral and median lobes of the prostate could be felt very much enlarged. The encroachment on the calibre of the urethral outlet of the bladder, in this, as in the other case, seemed to be due to the apposition of the greatly enlarged lateral lobes of the prostate. Tearing through the mucous membrane over these enlarged prostatic masses with the finger nail, I succeeded in enucleating with some difficulty nearly the entire prostate. I regret that the specimen has been lost. The prostate, in this case, as in the other, seemed rather soft and succulent. The middle portion was the most difficult to remove, being almost beyond the reach of my finger.

At the completion of the operation the bladder was drained by a large catheter through the perineal wound and siphonage arranged for after the patient was put to bed. The hemorrhage was moderate and the shock comparatively slight, and the patient rallied well from the ether.

His bladder was irrigated twice daily with a weak solution of permanganate of potassium.

On September 3, the tenth day after the operation, he was sitting up. His symptoms were at once relieved by the operation, and his convalescence was uninterrupted. He was discharged September 22, a little less than a month from the date of his admission. At this time the perineal wound had healed save for a small granulating surface. There was no fistula. The patient could pass his urine himself without pain. His cystitis had improved so much that urinary examination, September 12, showed no albumin, and it was much clearer, although still alkaline. I have not seen the patient since his discharge from the hospital, but consider the result, as regards the function of his bladder and improvement of his cystitis, as very good.

In comparing and contrasting these two cases of prostatectomy we struck with certain points of similarity as regards the probable mechanism of urinary obstruction in both patients.

In both we notice, as a result of the establishment of free bladder drainage, an almost immediate recession and disappearance of distressing pain and tenesmus.

I was struck with the comparative ease and readiness with which the prostate could be removed by the perineal method in this case, a method which is now generally abandoned on account of the difficulty in many cases of reaching and dealing with the enlarged gland. The method proposed by Alexander, of a combined suprapubic and perineal prostatectomy, would seem in many cases to be a most practical operation, combining, as it does, many of the advantages of both methods.

In the first case the suprapubic drainage was, as it often is, most uncomfortable for the patient. The dressings were constantly wet for the first few days and needed repeated changes,

as did the bed linen and clothes of the patient. This seems unavoidable in the many cases where, for various reasons, the bladder opening cannot be closed tightly about the tube and where it is essential to maintain bladder drainage for some time. The discomforts to the patients of this method of drainage, as compared with those in the case of the perineal method, seem incomparably greater. I do not wish to be understood, however, as drawing definite conclusions from these two cases. My object in presenting for your consideration these cases of prostatectomy is not to put forward any new principle in the treatment of prostatic obstruction, but rather to call to your minds the underlying principle of success in these operations of prostatectomy—viz, the complete removal of the obstruction to urination and the establishment of free bladder drainage.

Remembering that the operation is designed to prolong life in a class of sufferers who are frequently enfeebled by age and in whom the bladder trouble is often complicated by lesions of other viscera, especially the kidneys, we should not be surprised if the mortality seems disproportionately large. The unfavorable condition of many patients who are the subjects of this operation is one which the surgeon must accept beforehand as a factor in increasing the death rate. This fact is strikingly illustrated when we recall the fact that the operation of castration, which under ordinary circumstances has no mortality, shows in these cases of old prostatic disease a mortality nearly if not quite as large as the much more serious operation of prostatectomy.

According to the recent statistics of Cabot, out of 203 cases of castration for enlarged prostate there were thirty-nine deaths, a mortality of 19.4 per cent. The same author collected reports of twenty-two cases of ligature and division of the vas deferens, with seven deaths. He attributes the high death rate in these socailed minor procedures to the fact that in castration for enlarged prostate the diminution of the size of the organ is often so slow as to be of little immediate use in stopping the back pressure on the kidneys, which is especially harmful at a time when the operation has laid a fresh stress of work upon them.

The mortality rate in cases of suprapubic prostatectomy was, in the earlier series of cases, estimated as high as 25 per cent. Later tables show that with increased familiarity in the technics it is safe to place it at a considerably lower figure. Cabot thinks it safe to place it below 20 per cent, and considers it fair to assume that with added experience in the operation the death rate will be greatly reduced.

With a mortality no greater or slightly less than that of castration for prostatic hypertrophy, with the further advantage of allowing thorough exploration of the bladder for other possible conditions, and with the possibility of complete removal of the obstruction and thorough drainage of the bladder, the operation certainly should be ranked as a thoroughly justifiable and satisfactory method of procedure in properly selected cases.

In cases of prostatic obstruction, complicated by an intense cystitis, some method of treatment which includes free bladder drainage as well as the removal of the enlarged gland would seem to be imperative.

Microbic Virulence.

[Editorial in American Medico-Surgical Bulletin.]

While morphological considerations are the basis of scientific classification in nearly every department of biology, an exception, apparent or real, seems to exist in bacteriology. There form seems to count for but little, in the direction in which medical men and bacteriologists are most highly interested. Whether a micro-organism shall be classed as pathogenic or non-pathogenic is not and cannot be determined by form. We can tell poisonous aconite from edible lettuce, and the dangerous tiger from the harmless deer, by a comparison of their forms, but we cannot tell a dangerous or virulent microbe from a harmless one in any such manner. Exactly the same forms appear among the benign and the virulent. There are pathogenic cocci and harmless cocci, pathogenic bacilli and harmless bacilli, and pathogenic spirilla and harmless spirilla. Even in size and

structure the same correspondence seems to obtain between them. By no tests of staining or methods of culture can they be differentiated. There are benign forms answering to nearly every known pathogenic form. In harmless quietude within the mouths and nasal passages of healthy people can be found forms identical with those that have been declared pathogenic. In some cases this is probably due to the resisting power of the individual, but not in all.

Bacteriologists have long known that the condition of bacterial virulence exists in all degrees from relative harmlessness to intense harmfulness. They have found, by studying the facts, that the pathogenic character of a microbe is not an adherent one, and only develops under a definite set of relations. They have again and again shown their power to control this, by attenuating virus and finally developing nonpathogenic from pathogenic forms. The exaltation of virulence has, however, proven a much more difficult problem to solve, so that along this line progress has been very slow. Nothing in bacteriology can be of greater importance to mankind, since on this knowledge depends our power to acquire the mastery of a multitude of dangerous ailments. It has been attacked again and again, and many ingenius hypotheses have been advanced as to its cause, but so far we are yet groping in the dark. Metschnikoff's experiments in the study of cholera, the methods pursued in the production of toxins and antitoxins, the serum reaction in typhoid fever and other important additions to our knowledge, have resulted from the study and fully compensate for all the labor it has cost. It has been found that the ordinary bacteria of decomposition sometimes take on malignant characteristics in deep-seated suppurating wounds. It has likewise been learned that the presence of a poisonous alkaloid like atropine in toxic amount gives to benign forms noxious qualities when introduced into the body of an animal. It is known that contagious and infectious diseases come and go like the rhythm of a wave, or ebb and flow like the movement of the tide. They sink from excessive virulence to mildness, and finally disappear to arise

again at some future time through mildness to virulence, when they again go from region to region like the circling of a wave. At present the whole world is anxiously watching the possible movements of such a development in the great bubonic plague now central in Bombay, India. It is being studied in every detail as it never was studied before. In it the conditions for research looking toward the discovery of the exact method by which virulence develops, are unique and promise revelations of great value toward the elucidation of this problem.

In June, 1894, the Japanese bacteriologist and former pupil of Koch, Kitasato, found in the blood of Chinese victims to this disease at Hong-Kong a peculiar shaped bacillus. On making pure cultures of it and inoculating susceptible animals, they were found to develop all the specific symptoms of plague. It is an immobile, short bacillus that varies somewhat in size according to the method of staining, is surrounded by a large capsule, possesses slightly rounded ends that in connection with a clear central zone or band give it the appearance of a diplococcus, develops in granular circumscribed colonies, and does not liquefy gelatin. It stains readily with aniline dyes, but if treated by Gram's method it does not retain the coloring matter. It can be cultivated easily on any of the ordinary culture mediums. It has been found in rats, mice, pigeons, flies, dogs, pigs and other animals stricken with plague. The first confirmation of its existence after its discovery, was made by Yersin of the Pasteur Institute at Saigon. When he found it he did not know that Kitasato had already discovered and reported it. The fact has frequently been noted that when a virulent type of scarlet fever or smallpox is raging in one neighborhood, a mild form will be found in another. This state of affairs obtains in India to-day regarding the plague. While the malignant form is devastating Bombay, Calcutta suffers from a mild type that is little if any more virulent than mild grippe. A bacteriological examination of the blood in these cases has shown a diplo-bacteria like that of Kitasato. Professor Cunningham points out that it lacks the infective power of the one from malignant

plague, but this is just what might be expected a priori from a study of the facts. Drs. Lawson and Takaki, during the Hong-Kong epidemic, found that the soil of the region contained a bacillus exactly like that found in the blood of the victims of the plague, but it lacked all virulence. Dr. Yersin has discovered that his cultivations of plague bacilli are at first exceedingly virulent and will infect and kill susceptible animals, but after several generations of them have been produced they at last lose all pathogenic qualities and become as harmless as those found in the soil. Each succeeding generation has less and less potency, so that they can be had in every degree of attenuation. As an examination of the feces of the victims of the disease has shown the presence of multitudes of diplo-bacteria, and as the soil is, in Oriental countries, the receptacle of excreta, it is quite probable that those found therein are the progeny of those discharged by the sick. If we inquire after the probable cause of this attenuation in laboratory culture and in the soil, we see two distinct lines to investigate. Either it is likely to be due to a lack of vitality in the microbe, or to suspension of its activity in the production of its poison, from lack of use. Dr. Yersin tells us that the signal of the suspension of its virulence is found in its increased rapidity of growth. This would seem to indicate that not lack of vitality, but lack of use caused this suspension. If this is so, then the restoration of this power should be brought about by conditions of an opposite character.

We know that in all progress, where there is a struggle for existence, an advantage gained by one side necessitates the acquiring of a corresponding advantage by the other under penalty of extinction. We see this illustrated in warfare. Every gain made in the improvement of ordnance requires a balancing gain in the methods of protecting forts and ships. When the latter are again able to resist the ordnance, then a fresh gain is sure to be made by the latter. Is it not just possible that in the warfare between phagocytes and bacteria, or coincident with the production of toxins and antitoxins of gradually increasing power, there is a corresponding increase in the intensification of

malignancy? In all very severe attacks of plague, the first warning the inhabitants have is the appearance in their houses of multitudes of diseased and dying rats. Since the rat is a very susceptible animal to the plague, may it not be that in its blood exists the culture field for the development of malignancy? Beginning in a mild form, the bacillus may in its blood acquire virulence though the battle being evenly matched. A test of this could easily be made. Enough of the innoxious or nearly innoxious bacilli could be inoculated to overcome their slight power of resistance. Successive repetitions from animal to animal should show an increase in power if the inference is a sound one. Such experiments might also be tried under a restricted oxygen supply to determine how far Salmon's hypothesis accords with the facts in this direction.

Asepsis in Country Practice.

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While strict asepsis is met with only in the most modern hospitals and rigidly conducted private institutions, it is possible, however, for the country practitioner to carry out a practical asepsis, which will answer for all minor procedures. In accomplishing this end the utensils commonly found in any well regulated household will answer all requirements. To these may be added a tray, or perhaps one or two other articles to make the outlay complete.

In the performance of any operative procedure it is unnecessary to speak of the importance of a well-cleaned, well-ventilated and well-lighted room. A liberal supply of china wash bowls and one or two small tables that have been scrubbed and that are further protected by covering with towels wrung out of a hot 1-1000 bichloride solution. An ample number of small plain towels and a sufficient supply of sheets largely adds to the success of the undertaking.

Following these very general preliminary suggestions come the directions for the cleansing of the hands, the operative re-

gion, the preparation of sponges, the sterilization of instruments, the preparation of irrigating fluids and dusting powders, and the sterilization, or properly speaking, the disinfection of dressings.

Cleansing of the Hands—Different procedures have from time to time been recommended for the cleansing of hands suitable for surgical and obstetrical manipulations. While each has its individual peculiarities, there is a sameness common to them all, namely: That the finger nails and subungual spaces are carefully trimmed and cleansed by means of a knife, then the hands are vigorously scrubbed by means of a brush with soap and hot water. This, the first and mechanical part of the cleansing, is by far the most important. To complete the disinfection many recommend the immersion of the hands and arms in a solution of bichloride, varying from 1-1000 to 1-3000, as the attendant may prefer. Another method, which has become popular of late, is to immerse the hands after they have been thoroughly scrubbed in a strong solution of permanganate of potash, until stained rich brown, then immerse them in a solution of oxalic acid, following this a solution of bichloride. Although this is by far the most complicated method, it has the support of many warm and able advocates. For this latter procedure to be successful the solutions should be concentrated, that the permanganate not alone destroys the foreign organic matter, within the recesses of the skin, by its direct action, but that the oxalic acid may generate chemical products, which insure the destruction of all microbial life.

The Operative Region—The parts involved to be thoroughly scrubbed by means of a brush with hot water and soap, washed off with alcohol and irrigated with a solution of bichloride, 1-1000. The adjacent region should be carefully covered with towels that have been boiled in a solution of bichloride, 1-1000.

The Preparation of Sponges—A sponge should never be used a second time after it has once served through an operation, for this reason, it is best to buy the cheaper, and commercially known as the grass sponge, in lieu of the finer and more expensive surgeons' silk sponge. The methods of sterilization which render fabrics trustworthy cannot be applied to the sponge without practically destroying its usefulness, and it is for that rea-

son that many very properly insist that the sponge should be used but once. In preparing the sponges they can be bleached and disinfected either by passing them through successive baths of permanganate of potash, oxalic acid and hyposulphite of soda or by subjecting them to the action of chlorine water or chlorine gas. Of the two the former is simpler and preferable. After the bleaching and disinfecting they can be preserved by storing them in a solution of carbolic acid of 5 per cent strength. Many, however, consider either of these too troublesome, and resort to sponges prepared of absorbing cotton and gauze. These sponges consist of small masses of cotton, which are covered over with gauze, tied in such a way as to give the whole a more or less globular shape. A still simpler method is to have an assistant supplied with properly sterilized gauze, and from time to time the assistant cuts small fragments from his supply of gauze, as they may be required.

The Sterilization of Instruments—Unless the instruments be supplied with bone or ebony handles they can best be sterilized by boiling them in a solution of sal. soda in the strength of a teaspoonful to a quart of water. Should, however, there be any bone or ebony attachments this method is impractical. In such an event they had better be thoroughly scrubbed with hot water, soap and brush, and then immersed in a solution of carbolic acid 1-40. Instruments should never be brought in contact with mercurial solutions, since the latter salt is promptly decomposed with the deposition of a mercurial film from the instrument.

The Preparation of Irrigating Fluids and Dusting Powders—The harmful effect produced by irrigating aseptic wounds with irrigating fluids is too well known to require any comment here. Strong antiseptic solutions are useful on the unbroken skin, but after the skin is divided the resulting wound should be cleansed when necessary, only by the blandest irrigating fluids, and none so perfectly fill this indication as the normal salt solution, which practically represents the serum of the blood. Besides a trace of carbonate of soda it contains chloride of sodium in the strength 6-10 per cent. This solution, besides serving as an irrigating fluid, tends in a slight degree to arrest any oozing. In addition it has an unusual cleansing effect upon the cut surfaces.

The dusting powders mostly used are boric acid or iodoform. The writer has found a mixture of the two in the proportion of one part of iodoform to seven parts of boric acid a very useful combination. In these proportions we have an excellent drying powder, possessing all of the desirable features of iodoform without any of the undesirable ones. The odor of iodoform has always been a great drawback to its more general use. This, however, can be masked in several ways. A few drops of the oil of bitter almonds, thoroughly saturated with every drachm of iodoform, will thoroughly mask its odor. The same end can be reached by adding a few grains of coumarin to every drachm of iodoform, rubbing the two thoroughly.

Disinfection of the Dressing—In sterilizing gauze by means of steam the materials must be subjected to a temperature ranging between 240 and 250 degrees F., and this temperature can only be obtained by superheating the steam so that the sterilization is carried on under a pressure of ten to twelve pounds. To accomplish this it requires the outlay of an expensive apparatus, which, of course, would not justify a country practitioner. Many still use the well known Arnold's sterilizer, which is worse than useless, inasmuch that the sterilization is a failure, and since such is the case its use tends to lead to a false sense of security. Any one can demonstrate the inefficiency of this sterilizer by placing in it a flask of water, and however long continued or vigorous the heat may be it will be impossible to bring the flask to a boil, showing that a temperature of 212 cannot be reached by the water in this flask, or if a flask with its contents in a boiling state be placed in the sterilizer the heat which it contains will be unable to keep the contents of this flask in a boiling state. Should the practitioner desire to prepare his own gauze, which he can readily do, he can secure what is commercially known as the butter cloth, which is a fabric that has been made absorbable by having its fibers freed of fat. To prepare from this bichloride gauze he has but to cut the butter cloth into suitable sized pieces, and then boil them for a half hour in a 1-1000 solution of mercury. This is allowed to stand, and then wrung out and carefully stored in glass-stopped jars or vessels. From this bichloride other gauzes can be prepared, namely, a 10 per cent iodoform gauze, which can be made by saturating the bichloride gauze with a 10 per cent ethereal solution of iodoform, being careful to work the solution well into the fabric and then exposing it long enough to allow the ether to evaporate. In conclusion we desire to state that these very general and disconnected hints have been offered, believing that they may be of some use to those engaged in minor surgical and obstetric manipulations.

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